Exploring (de)motivating factors in school years. The role of students, schools, and families from a Self-Determination Theory perspective. A thematic analysis.

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Abstract

Using the Self-Determination Theory (SDT) as the theoretical background and Thematic Analysis as the methodology, this qualitative study explores factors that intrinsically or extrinsically motivated or demotivated students through their course to higher education. Six Greek senior high school graduates discussed their school experiences in semi-structured interviews. Using a top-down, deductive, descriptive / non-interpretative analytic strategy the content of the interviews was analysed. Six subthemes were identified, divided in two main group themes: The roles of tutors, grades, and module experientiality were explored as parts of the educational environment; also, the role of choice, the need for sense, meaning, and utility value, and finally the roles of their parents, as parts of the family and student environment. The analysis of the narrative content of the interviews revealed ways in which schools and families interact with students, satisfying or thwarting their needs for autonomy, competence, and relatedness, and thus promoting or hindering their intrinsic motivation. Using the explanatory, and in many cases predictive capacity of SDT, the results outline some focus points for future research and possibly future interventions to promote intrinsic motivation of Greek students.

Keywords

Thematic analysis, Self-Determination Theory, Intrinsic Motivation, Autonomy, Educational Psychology

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Introduction

Theories on motivation have gained substantial ground over the last two decades, inspiring widespread applications and interventions; from healthcare to workplace performance, education and more[1]. Self-Determination Theory (SDT), is a theory of motivation that matures and finds applications in many subjects, comprising a *'Copernican turn in the field'.* Its main emphasis is on peoples' integral motivational tendencies for growth and knowledge and how they may be reinforced; contrastingly to behaviouristic methodologies, which try to form and regulate motivation from the outside [2];SDT is an as a *macro-theory*, whose main hypothesis is that all individuals, regardless of their cultural and developmental discrepancies, share a common set of psychological needs, which may be enhanced or hindered by other people, social influence, or situational factors [3]. Hence, SDT is an *organismic dialectical approach*; it fundamentally assumes that people, as active organisms, have developed a tendency towards developing and conquering new challenges by assimilating new experiences into an articulate sense of self [4,5]. This natural mechanism, however, does not function automatically but rather needs nutrition and support from the social environment. The theory suggests that humans have *three basic psychological needs* that act as the main nutrients for healthy development, namely the needs for *Autonomy*, *Competence* and *Relatedness*. The definitions of these needs are given by Ryan and Deci [4]:

Autonomy refers to the individual's feelings of initiative and ownership over their actions. It is strengthened by experiences of interest and worth, while it is weakened by experiences of being externally regulated, such as incentives or punishments. *Competence* concerns the sense of mastery, of succeeding and growing. It is nourished in well-structured settings that have optimal obstacles, constructive feedback, and development opportunities. Finally, *relatedness* refers to a sense of belonging and association. It is aided by the expression of gratitude and care. These three basic needs are regarded as important to motivation and well-being.

The extent to which these needs are satisfied, greatly determines the ways people will develop and function throughout their lives and experience well-being and functionality or ill-being and dysfunctionality. As reactions to these needs being unsatisfied, the latter two are often expressed as certain types of psychopathology, prejudice and aggression [4]. As such, they can either support human tendency for engagement and psychological development, or they can impede it, causing a lack of assimilation, triggering defence mechanisms, and leading to overcompensation through *'need-substitutes'* which are *'goals that people engage in order to compensate for*

need frustration'[6]. With this notion in mind, it is concluded that the dialectic between the organismic and social aspect serves as a basis for the SDT predictions regarding behaviour, experience, and development; SDT researchers examine how educational environments fulfil or fail to meet these basic needs[4].

There are two main types of student motivation to learn depending on the degree of autonomous endorsement of the action and its aim: *intrinsic* and *extrinsic*. *Intrinsic* motivation is nurtured in contexts that enhance the *three basic psychological needs*. It refers to actions that are performed for the sake of pure enjoyment and satisfaction. *Extrinsic motivation,* in contrast, is a less homogenous term and far more complicated. It reflects a wider range of types of motivation, depending on the locus of control and regulation, such as *controlled motivation,*which is usually driven by externally imposed incentives and penalties, *introjected motivation* which refers to actions partly controlled externally(e.g., driven by shame, guilt or self-esteem),*identified motivation*, which is partly internal (e.g., consciously valued) and finally *integrated motivation*, reflecting values fully assimilated into one's self[7](Edward L. Deci & Richard M. Ryan, 2002). *Introjection*in Academic settings often becomes part of internally controlled regulation, as it may shape itself into *'ego-involvement'* [8], associated with achievement, thus becoming a significant part of a person's self-esteem.

Also *identified regulation* may be internally controlled, as the person knowing ly recognises or endorses some value in an activity, leading to a moderately high degree of volition or willingness to perform it[7].

However, the form of intrinsic motivation with the highest degree of autonomy is *integrated regulation* in which a person does not only distinguishes and endorses the value of an activity but also finds it to fit their interests and values. This outlines a distinction between autonomous extrinsic motivation and purely intrinsic motivation: even though they both share a high degree of volition, autonomous extrinsic motivation is mostly connected to perceivably valuable and worthy activities, while intrinsic motivation includes a strong element of enjoyment [9].

Beyond the furthest end of the motivation continuum, there is also *amotivation*, which describes the lack of any intentionality. It is very common in classrooms and derives from either perceived incompetence or absence of value or interest. *Amotivation* is a solid negative predictor of engagement, learning, and well-being[10].

Research suggests that not only intrinsic motivation, but also well-internalised, and hence autonomous types of extrinsic motivation, predict a range of positive results across multiple levels of education in diverse cultural environments [2].

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These two types of motivation, intrinsic and autonomous extrinsic, collectively referred to as *'autonomous,'* provide a set of beneficial outcomes for students, by enhancing engagement, creativity and psychological well-being. Contrastingly, less autonomous types of extrinsic motivation collectively referred to as *'controlled,'* may lead to reduced well-being and weak perseverance towards academic goals [11-13].

When applied in educational settings, SDT focuses on the promotion of interest in learning, appreciation of education, and having self-confidence over one's abilities and traits [10]. In school settings, it seems that parental support may be one of the predicting factors of future academic success [14,15]. Critically, in *'Student-centred'* learning settings, where student responsibility and activity are emphasised over course content or tutor's doings, students tend to show increased levels of perceived autonomy, competence and relatedness, which may lead to better motivation[16]. Humans are naturally curious, inquisitive, and innately fond of learning; they desire to internalise surrounding knowledge. These propensities for curiosity [17], interest and sought-out coherence in knowledge [18] could be nurtured and harnessed by teachers as lead their students in learning.

Bailey and Phillips [11] claim that students who are intrinsically motivated experience more Well-being, more positive and less negative feelings, more meaning in their lives and better marks; contrastingly, extrinsic motivations report little significance relative to these outcomes. Additionally, amotivation was significantly related to anxiety and depression.

Based on the evidence from the SDT and relevant research, it is suggested that parents and tutors are the immediate social influencers that may alter an individual's course to intrinsic motivation[19]. As such, this study aspires to examine possible ways in which the influence of tutors and families act as hindering or enhancing factors for the self-determination and, subsequently, the motivation of students. By interviewing six recent Senior High School (or '*Lyceum*' in Greece) graduates, who had an interest in continuing in Higher Education, the proposed study aims to explore useful insights regarding the role of schools, families, tutors, and students in the motivation of the latter, by examining their school year experiences. To the researcher's knowledge, up to the point where this report was being written, no other study attempted to explore from an SDT perspective the factors determining the motivation of young adults who recently completed school and attempted to enter Higher Education. It is hypothesised that the findings will reiterate the existing results from quantitative and qualitative research.

As with any qualitative approach, the aim of this study is not to create generalisable data about the implications of SDT in classrooms; it is rather to explore the narrative content of students, regarding their motivation –*extrinsic or intrinsic*– and how environmental and internal factors hindered or enhanced it. Factors that affected their autonomy are examined, with an emphasis on their educational and family environment. No conclusive data can be drawn from such an examination, but an effort is made to clearly outline the existence of such factors.

Methodology

Data Collection

This study uses a multi-level Thematic Analysis (TA), a qualitative method for identifying and organising persistent patterns of meaning and content; its methods are employed in most qualitative methods of analysis. However, unlike other methods of qualitative research, TA is not bound to any specific theoretical framework, allowing the researcher to choose and commit to whichever they believe is the most suitable for the study [20-22]. As the SDT model is used as the theoretical basis of this investigation, the appropriate organismic dialectical framework [5] is being employed for this research, which assumes that people evolve through constant interaction between the organism and the environment.

Participants

Six Lyceum graduates were recruited via proxies. To maintain anonymity, all forms and informative material were sent to the prospective participants via proxies and the real name was never exposed to the researcher. Inclusion criteria were to be above eighteen years old, to have graduated from a Lyceum at a maximum of three years before the time of the recruitment, and to have attempted to enter Higher Education. People already known to the researcher were excluded. People that have a high chance to share information with other participants after their participation were also excluded (e.g. close friends or siblings of candidate participants). Nine people were contacted and seven of them accepted to participate. One was excluded as underage; another withdrew a few days before the interview; the process of recruitment was re-initiated, and a new participant was recruited. The final number was six participants, of which three were male and three female (N=6) aged 18 to 20(mean=19,3 S.D.=0.93).

Two of the participants ('CJ', 'Brett') followed the International Baccalaureate (IB) programme, while the other four ('Vangelis', 'Rick', 'Anastasia' and 'Melina') followed the Panhellenic Exams path.

Ethics

This study was declared of having low to moderate risks for the participants, and it was conducted following the ethics standards guidelines of the University of Derby Policy and Code of Practice on Research Ethics [23] and the British Psychological Society [24]. All participants were informed of the procedure and its risks and gave informed written consent via the appropriate forms. However, it is important to say that participants were not fully informed of the true nature of the study, as it has been reported that people usually overestimate the degree of their volition [25] and retroactively assign positive qualities to their choices [26]. As such, the participants were informed that they will discuss their school experiences, and the true nature of the study was revealed only during post-interview debriefing.

Materials

Data were extracted from a set of six semi-structured remote interviews, based on a set of questions formulated to extract content relevant to the objectives of the study. Questions like *"Were there any modules you liked, but the tutor made them unattractive? Or, contrastingly, were there any tutor you didn't like at first, but did the tutor make you see them more positively?"* were used to extract data (see Appendix 1). Due to the safety hazards from COVID-19, the interviews took place remotely, using Zoom teleconference software. It is worth mentioning that, according to recent research, online videoconferencing interviews may provide adequate data, as participants –in most cases– can build sufficient rapport with the researcher, similar to the one in face-to-face interviews; communication via email or messaging may advance this process; additionally, the choice to use video or audio-only, allows participants to choose their preferred degree of contact [27,28].

The data was transcribed using computers and *Sonix.ai* voice-to-text platform. Transcripts and audio were compared, checked, and rechecked for errors by the researcher, and coded using *NVivo 12*. The extracts chosen for analysis were translated from Greek to English for reporting reasons.

Procedure

The project was divided into three parts: At Part I, the student devised and submitted a proposal to the University Committee. The proposal included the aims and rationale of the prospective study, along with the interview questions. Upon approval, the researcher initiated Part II, which included the recruitment of participants and the interviews. Part III followed, including transcription, analysis and write up of the report.

All participants were informed of the procedure via appropriate forms (see Appendix 2) and declared their will to participate by returning their signed consent forms, where the date of the interview was stated and a pseudonym to use. Then the researcher created the teleconference link and the proxy sent it to the participant. Each interview lasted approximately 50 minutes and were recorded. All participants received a debrief form and were also verbally informed of their rights, including the right to withdraw. No post-interview withdrawals occurred.

The audio from each interview was extracted and transcribed by the researcher. The transcripts were read several times to achieve familiarisation with the raw data; the data was coded into nodes, themes and subthemes, and the researcher started analysing text extracts. Two themes with three subthemes each were identified and analysed (see Appendix 3).

Analytic Strategy

As the researcher was 'suspicious' of the possible implications of the theory in educational settings, the approach was mainly descriptive (non-interpretative) and deductive ('top-down').

The first theme addresses the role of Schools and the educational environment and includes the role of Tutors, Grades and Experientiality of modules. The second theme addresses the role of students and their families and includes the role of Choice, the need for Sense, Utility and Meaning and finally the role of Parents.
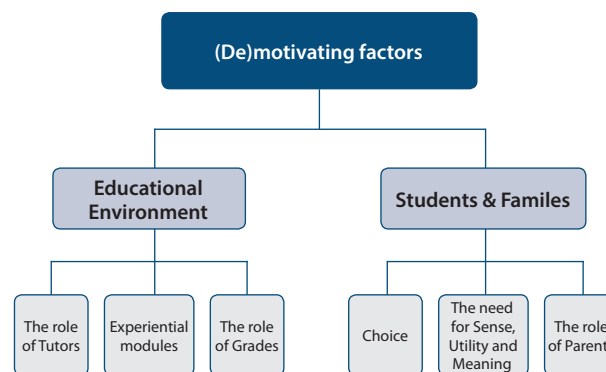
Picture 1: Themes and Subthemes of the study

Table A: Focus of exploration per theme / subtheme and the three basic psychological needs of Self-Determination Theory

Theme	Subtheme	Main focus	Secondaryfocus
Educational Environment	The role of tutors	Autonomy	Competence & Relatedness
	Experiential modules	Autonomy	Competence & Relatedness
	The role of Grades	Relatedness	Competence
Students & Families	Choice	Autonomy	Relatedness & Competence
	The need for Sense, Utility & Meaning	Competence & Autonomy	Relatedness
	The role of Parents	Autonomy & Relatedness	Competence

Table 1: Focus of each theme per Basic Psychological Need according to Self-Determination Theory

Theme 1: Schools& educational environment

Subtheme 1.1: The role of Tutors

The first subtheme of the first theme, emerged as the participants discussed the role of their tutors and how they affected their interest in courses, their career choices, learning and overall classroom experience. There was a consensus regarding the importance of tutoring and mentoring skills and the differences between teaching styles. In an attempt to track the antecedents of behaviour that may determine the teaching style –motivational vs. controlling– of teachers, Reeve et al. [29] assessed their personality traits and their motivating styles, and their findings suggest that a strong connection between the two may be established. The following extracts outline this notion and what the participant expected from her tutors:

CJ:

1. *"There are some teachers whose personality and attitude towards students, makes them more effective than others. Many teachers are trying to get to know (…) each child individually. And they realise who you are and the different needs you may have; and you know that if you have an issue or a question you can talk to them; you know that someone is ready to listen to you'.*

The participant seems to value a more personalised approach from tutors. Skinner and Belmont [30], underline how crucial tutor's involvement and interpersonal connection between student and teacher may be in classrooms, and how it affects motivation; the provision of autonomy support and structure predict show well-motivated children are through a school year.

In almost any case of student engagement in the classroom, the teacher's behaviour has a rolein the induction and regulation of the engagement. To better understand this phenomenon, numerous researchers have explored several supportive socio-contextual factors (Skinner et al., 2008), including *instructional style*, the persistent patterns in a teacher's methods of instruction, *interpersonal style* with students and *classroom management* (Schultz, 1982).

At times, teachers' beliefs and attributions and their perceived control over students' failure are connected to their thoughts and feelings; then they may react ina punitive or instrumental manner[31]. The following extract outlines the failure of a punitive approach and a change of attitude on the student side with a more supportive personal tutor:

Rick:

1. *"In elementary school, we had a teacher who scared the hell out of us. I remember something that's childhood trauma, that's for sure… She picked me up to solve a math problem in sixth grade and she said, 'if you don't solve it, nobody is going out for the break, the class won't come out'(…) I was holding the chalk my hand was shaking, I didn't know what to write…'*

2. *'That incident made me very intimidated by math. And then in Lyceum, I met a personal tutor…it's not that he just helped me with math. He helped me, as a person, not to be afraid of them (…). And if I had a silly question, I'd tell him. And he would explain to me,again and again, until I fully understood. He didn't have that 'here we go again' attitude. He said 'no matter how many times it will take; I'll be here to explain it to you!' (…) At school, if I didn't understand in the first place, I wouldn't ask again. It depended on the teacher, but most of the times, I wouldn't ask twice'.*

According to Reyna and Weiner [31], when teachers perceive that their students are in control of the cause of their failure,they become angry and adopt more punitive approaches; contrastingly, when they perceive that they are not, their approach is less punitive, more sympathetic, more utilitarian, and more supportive. Furthermore,Reeve [32] argues for the existence of several tutor behaviours that have been identified to promote or undermine intrinsic motivation: listening, responding to student-generated questions and empathet-

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ic, perspective-taking statements, giving time for independent studying, where mostly autonomy-supportive. On the other hand, giving out the solutions, directives, commands and holding instructional material where mostly controlling. These findings may explain the behaviour of the two tutors and consequently the participant's reactions.

Ryan and Brown [33] describe that teachers may introduce external controls, tights upervision, and rewarding/punitive evaluation schemes to make learning happen; often, such tactics reflect extrinsic pressures on educators, and/or the viewpoint that motivation is optimally formed through external reinforcement and not by enhancing students' intrinsic interest for knowledge. It is crucial to mention that this choice of tutoring is well documented to reduce enthusiasm, interest and joy of learning, and enhance boredom, anxiety and alienation, which is evident in many classrooms [2]. In contrast, defining clear goals and expectations seems to have a positive effect:

Vangelis:

1. *'I was fortunate enough to have teachers at school who understood and gave due importance to everything I faced (…) they gave the appropriate importance where they should the most, and they bypassed the minor things'.*

Rick:

1. *'He gave me the book and told me, "Come on man, it's not that hard, let's go step by step, and see what you can make out of it. No matter if you excel, or you do good or bad. The point is to keep improving"'.*

According to Berger and Girardet [34], teachers may provide autonomy support by nurturing student's needs along with a well-structured environment where expectations are clearly defined; then, students report more intrinsically motivated behaviours and better self-regulation of learning. Contrastingly, rewarding, punitive or otherwise controlling approaches to manage student engagement and behaviour tend to hinder intrinsic motivation. As such, the role of Grades is the next theme under examination.

Subtheme 1.2: The role of Grades

The role of grades throughout the school experience was discussed, and the opinions of the participants converged towards a high degree of controlled or autonomous instrumentality regarding grades. This instrumentality drives motivations towards higher grades, but also in some cases, grades are reported as being indifferent. The first extracts describe this notion:

Brett

1. *'I only saw grades as a way to get a good Christmas present'.*
2. *'I totally didn't care. I did it because I know if I fell below the margin, I was going to 'get the slipper' and lecturing…'*

SDT considers that excessively emphasising extrinsic motives such as grades, performance goals, and pressures may affect intrinsic motivation [2]. Grades are considered a classic extrinsic motive, but their effectiveness in performance remains questionable and an unresolved controversy [35]. At times, grades are reported merely as proof of performance to satisfy the parents [36].

Grades may lead to increased stress and anxiety [37] and academic misconduct [38]. Moreover, they may undermine learning through cooperation [39] critical thinking, hinder trust between educators and students [40] and subsequently, reduce autonomous academic motivation [41]. This notion is followed by another participant, who describes grades as a token of performance for the parents, clearly denoting an extrinsic locus of motivation. He also illustrates a clear, yet *'hard to explain'* lack of connection between a good grade and his own gratification:

Rick

1. *'…most children, when it comes to grades have the fear of their parents (…) But I never actually cared about grades. When I got my first '20' in history, because I was studying, I didn't care at all. It's hard to explain, but I wasn't really happy about getting it. It didn't offer me anything, it was not a "bravo" to me. I just knew that with such a grade, I wouldn't have any fuss from my parents, so I was not saying to myself "you've got a twenty, well-done man", I was saying "well-done man, you've got a twenty, and now your mom's not going to yell at you, and she will let you out'.*

The representation of grades may shift, according to the participant's perception of their usefulness; again, a pattern of instrumentalization and self-regulation of behaviour emerges, this time regarding grades, as they are now perceived as a means of attending to one's goals:

Brett:

1. *'The crossing line was when I got into the IB programme. Suddenly, I said that it's, OK, here's your future, you choose, you decide. And, bam, the change has been made. And I said that's the grade I got, and I got it for me'*

A recent study by Chamberlin et al. [42] compared the effect of interval (A-B-C) grades vs pass/fail and narrative appraisal, and revealed that interval grades failed to enhance academic motivation and they enhanced anxiety and avoid-

ance of challenging courses. In contrast, narrative appraisals seemed to promote basic psychological needs and improved motivation by providing productive feedback and by building trust between educators and students. The following extract outlines this notion, and questions grade representatives of the overall student performance:

CJ:

1. *'In the Greek system I was not evaluated through work, and all my grades came out of exams… I was very happy when that changed (…) because a grade came out of the sum of my projects and from voluntary work and that was more encouraging'.*

2. *"…being a good student is a set of things. yes, it's not just about having a good grade. It's about being able to learn to think, about using your critical thinking, about being a complete person."*

The participant, subsequently describes a shift in her perception towards grades, as they move away from the focus of interest:

CJ:

1. *'As I got older and after going through my adolescent phase I questioned a lot of things and a lot of values. I started to dispel that thought a little bit. Grades were very important to me because they gave access to university, along with other things of course. They are still important, and now, while I'm at the university, I managed to see a grade as a goal, but it's not as the only goal'.*

From the analysis of the above extracts, it becomes evident that grades mainly posit an external motivation; however, it may be assumed that when intrinsic instrumentalization occurs, the perception may shift, and motives tend to become more internalised. The role of parents and their opinion is also relatively dominant, and as such it will be discussed in a distinct subtheme.

Subtheme 1.3: Experiential modules

The third subtheme includes the role of experientiality and interactivity in classrooms. A consensus is reported regarding its importance in fostering and maintaining interest, curiosity, and motivation:

Melina:

1. *'…When it was mostly interactive, that's when I knew I liked learning it, I was more interested in looking into it. I got involved, let's say'.*

2. *'What I liked about some teachers is that they asked us, stu-*

dents, to do something at the time of class, to make it interactive (…) like a scientific experiment, to have something a little more practical, and not just theory and stuff. Or, let's say, in classes where they started a conversation, let's say sociology literature and stuff, to give us, the students, an opportunity to talk about stuff'.*

Intrinsic motivation, as described by SDT, outlines the willingness to participate in an activity that provides pure enjoyment and pleasure, without the necessity of having an external reason [10]. This kind of motivational orientation is fuelled by intriguingness and inquisitiveness [43,44], in simple terms, *curiosity*: A trait that has been described by Loewenstein [17], as a natural human tendency that drives and affects human behaviour, beginning at childhood and spanning throughout the lifetime. Curiosity has been consistently described as of uttermost importance to educational performance since the early years of educational research [45], with pedagogical literature long providing practical tools to educators to stimulate curiosity [46,47].

Experience Learning Theory or ELT [48-50] is an inherently student-centric, hands-on pedagogy describing learning as a process of thought forming then re-forming through experience, leading to the formation of new knowledge. A participant positively refers to his elementary school as being diversely experiential:

Brett:

1. *'My elementary school was an experiential school, I came across a lot of things, culture tours too, generally it was a school where I learned a lot of new things'.*

Furthermore, according to Muntean [51], hands-on learning is an educational approach that uses practice to lead to deeper comprehension and enhance competence, which according to SDT theory increases intrinsic motivation [2]. This line of thought may be described in the following extracts:

Vangelis

1. *'I've had an appeal to circuits since I was a kid, to machines, and such…I liked them, but at the same time I wanted to know why they worked, to discover the mathematics and physics behind their functions. That's what I had as an inclination'.*

The participant also describes his engagement to activities spawned by curiosity and the need for play and exploration outline intrinsically motivated behaviours not dictated by external sources or pressure; they come with an attached aspect of joy and satisfaction:

2. *'…by playing, yes. My father would open the hood of the car, let's say, and I would look, ask him questions, and so on. I've*

built my own electric circuits at home on my own. I think I had an appeal... I liked it; I was interested in such stuff'.

Despite being 'fun' they are serious organismic elements for engagement, attentiveness and mastery, likely responsible for the majority of human learning throughout lifespan, in contrast to externally instructed learning [4].

Chakraverty and Tai [52] describes the ways that parents'out-of-classroom activities motivate their children and enhance their interest in science, thus illustrating the need for a stimulating environment *beyond* classrooms, In the following extract, the experience of learning through playing is described at home, matching the way a participant perceived math exercises:

Vangelis

1. 'I saw math problems as puzzles, I was having fun solving them, I enjoyed it. Math was like a game to me, especially in early school years'.

Despite the abundance of evidence supporting the need for the cultivation of curiosity and explorative stance to boost intrinsic motivation, it is questionable whether the educational system successfully does so [53].Children show an early joyful fascination about learning; however, for many of them classrooms function as an oppressor of their once unquenchable hunger for knowledge. Furthermore, for quite a lot of students, motivation takes a degrading path throughout their school years [54]. Ryan and Deci [2] outline several structural factors that may unintentionally affect the motivation and performance of both educators and students. These include, among others, the size of the class and mandated curricula, with the latter indicating a need for more personalisation, openness, and choice.

Theme 2: Students & families

Subtheme 2.1: Choice

The participants discussed the role of having choices throughout their path in school years, and the general notion throughout the database is that well-designed, meaningful, and personally relevant choice is a critical determinant of intrinsic motivation of students. Choice appears as a promoter of autonomy, with positive outcomes being recorded across a variety of academic settings and populations[19,55]. A possibly significant yet poorly identified determinant of this demotivation may be the lack of choice and decision makingin school environments[5,56]. This notion is supported by the majority of educators[57].

In an attempt to match students' personalities and their educational track choices, career orientation and testing methods are gaining substantial ground in schools. It is widely recognised that such choices may have various long-term consequences related to life success[58]. In the following extracts, it is reported that two of the participants went through some career orientation:

Brett:

1. '...I also did career orientation, and I had my personal advisor who analysed my character, together we saw my strengths and weaknesses and we said that OK, you are this guy, these are some graduate programs but also jobs of the future that you can get into and be good in them'.

Melina:

1. '…I also took a career guidance test. Which I feel affected me a bit. I wasn't too proud of that, that it affected me. They told me I might have a flair for the most theoretical courses. That's how I may have realised, that I didn't like scientific professions'.

There are several theoretical frameworks behind career orientation tests and assessments, such as the Theory of Vocational Personalities and Work Environments by Holland [59] and the Self-Concordance Theory [58,60] with the latter being an SDT based approach. It is not clear from the interview extracts if the students that went through career orientation had an assessment relevant to some specific theory. However, the common ground for most theories is that choices that match an individual's personality and interests lead to better outcomes for well-being[58] and that is mostly, but not always, beneficial for young people [61]. From the above extracts, it is outlined that career orientation practices were helpful, despite some frustration due to discrepancies between expectations and results; thismay also be attributed to some loss in the perceived locus on control and lack of information regarding career choices[2,62,63], or to the lack of confidence in one's ability to productively plan a career, predominately among females[64].

The SDT supports that when parents and educators interact with schoolchildren in ways that enhance their autonomy, they encourage them to maintain their intrinsic motives for exploration and knowledge accumulation. Furthermore, they help them develop autonomous self-regulation by internalising and integrating according to the theory, *'a sense of autonomy represents a feeling of full volition and "choicefulnes" regarding one's activities and goals'*[19]. This relation between the existence of choice and motivation may be outlined by the following set of extracts:

CJ:

1. *"There was a greater variety of courses to choose from and choosing ones that interested me helped me a lot because I only had courses that I liked. And that's why there was more room for creative stuff".*

The same participant, who followed the path of International Baccalaureate (IB) describes that the freedom of novel courses provided by the programme, enhanced her willingness to engage in studying and helped her to build resilience even for least favourable courses:

2. *'Choosing courses that are interesting and not so familiar pushes you forward. In class, it draws your attention, and you know that, you must work with the material you've chosen yourself'.*

This feeling may occur from opportunities to engage in *self-direction* which involves goal setting, grounded on personal interests and values, decision-making regarding necessary actions needed to reach those goals along initiative-taking towards progressing those goals to determine a person's own prospects [65]. Furthermore, the theory posits that providing choice while removing external controls (e.g. pressure or rewards) is the optimal way to promote autonomy [13]. Consequently, choice is key in student motivation; specifically when it promotes autonomy, competence and relatedness. [66].

Numerous quantitative studies on student motivation, describe adherence of students to self-regulated learning strategies to be higher when the control of choice is mostly on the student, and lower when the control of choice is mostly on the teacher [19,67]. This perseverance in successfully following some least favourable courses is described in the following extract, while the difference between the Greek School and the IB is contrasted:

Brett:

1. *'The Greek system trips you into a system that is closed and set, which you have to follow. The IB gave me choices. And generally, it is very important to have the chance to make a choice... for me, at least'*

2. *"…sometimes you had to deal with a course that you didn't like because it was included in the IB curriculum. I had to take such courses (…) But on the other hand, I had lessons which I had chosen."*

Ryan et al. [68] claim that motivation that leads to actions of instrumentality or utility (e.g., doing schoolwork to achieve a future goal), is inherently extrinsic. However, it is important to understand that the degree to which the intrinsic motivation of people is undermined by this extrinsically motivated behaviour may depend upon the type of instrumentality [69].

Ryan and Deci [13] describe this type of extrinsic motivation as *autonomous,* contrasting it to *controlled* types, as individuals engaging in the action believe that it is beneficial for their career. Their choice is of *instrumental* value rather than integrally pleasing. This becomes evident as the participant rejects the extrinsic pressure and adheres to his own internalised motives, outlining the notion of autonomous self-regulation built by a supportive system, enhancing intrinsic motivation:

Brett:

1. *I don't like it when other people put it a 'must' on me. Only when I've set a target and I say that I want to do it, I want it myself. there's a 'must' in "I have to do this to achieve my goal". So, the concept of "must" changes.*

From an existential point-of-view, true *intrinsic motivation* resembles the concept of *authenticity,* which describes a true-to-one's-self behaviour [70,71]. According to the SDT, the following extracts may describe a change in perceived control, followed by a change in emotion[62]after making a more *authentic* choice [71,72]:

Melina

1. *'…initially, I had something else in mind for the panhellenic exams, but at some point, I realised that I did not want to deal with the exams'.*

2. *'I started not going to the coaching school and going to dance lessons. I felt a lot of pressure, I didn't want to go there, I just wanted to go to my dance school and be there for hours'.*

3. *'…at first, I thought that dancing was a bit of a hobby and that what I loved was studying chemistry…I liked chemistry in general, but it wasn't my choice after all, and I completely changed my course (…) and I felt relieved, immediately'.*

From the extracts of this subtheme, it may be assumed that motivation shifts from intrinsic to extrinsic and vice-versa, depending onthe perceived locus of causality and self-relevance of the participant. According to Vansteenkiste et al. [73] a well-internalised extrinsic motive may act as a strong motivator, as long as the individual relates to a goal and the actions needed to attain it are relevant to one's values and commitments. Therefore, the action becomes instrumentalised and autonomously regulated, as it leads to the fulfilment of an innateneed [4]. It has been well illustrated that the most desirable form of motivation is intrinsic, as it is paramount for autonomous motivation by impulsively and volitionally driving individuals into action [74,75]. However, SDT also describes that well-internalised and identified forms of extrinsic motivation may also lead to volitional, autonomous actions that are instrumentalised to achieve a goal that is different from the

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content of the action [13,32]. This kind of regulation, in most cases, is not easily achieved, as it comes through maturation and acquisition of solid self-awareness [76], leading to the notion that the role of choice is seamlessly connected to a need for personal meaning and/or Utility Value, which comprise the next subtheme under exploration.

Subtheme 2.2: The need for sense, utility and meaning

The participants discussed their need for understanding, sense, and meaningfulness of their courses, as a strong prerequisite for engagement. *Meaning* and the processes that produce it are described by theorists using a diverse set of definitions; however, a common, unifying theme is that people create meaning by comprehending and connecting, by synthesising and integrating experiences, in a process that is substantial for development and well-being[77].

The need for meaning and purpose is also outlined in SDT, as the need to fulfil the basic needs for Autonomy, Relatedness and Competence [18,78]. Some theorists, like Frankl [79] and Andersen et al. [80] go even further and classify the need for meaning as a basic psychological need towards self-actualisation.

In the previous subtheme, the instrumentalization of knowledge (extrinsic or endogenous) was explored. In this subtheme, the need for identifying some Utility Value is investigated, but contrastingly to the previous subtheme, it is done regardless of any direct relation to students' future aspirations and plans, but rather as a part of *meaning*. It should be noted that in many –but not all– cases, Utility Value and Meaning share a significant overlap. But in other cases, participants identified utility value in courses, regardless of their future plans. This is well outlined by the following participant:

Anastasia:

1. *'... and what I appreciated about this man was that he tried not just to teach us about religion or stick what was in the book, but to teach us some things about life, to pass to us some messages."*
2. *'I could see that chemistry was like in everyday life... that it was everywhere, so I got interested in learning things'*

Of the extracts above, the 1st may refer to a general meaning and relevance of religious studies, while the 2nd may also outline a more personal appeal to chemistry, as the participant had an interest in becoming a chemist.

On the same notion, another participant follows up, intertangling a general appeal to scientific studies, as the absolute character or math is positively described, along with his inter-

est in becoming an engineer, thus outlining a connection to his values but also with enjoyment:

Vangelis:

1. *'...I also liked the applied aspect of being an engineer'.*
2. *'I've always liked the fact that in math, there was one solution. Period. Iit all came out in a single way. There was no question, no doubt. There was nothing like it in literature, or essay writing, let's say, where if I wrote something that the one who corrected it didn't like, might lead to a lower grade'.*

The next participant describes his frustration towards courses where he couldn't make sense, or he couldn't understand, in contrast to a course that he could relate as it had, according to his views, some utility in real life:

Rick:

1. *'In byzantine history (…) I couldn't find coherence between things(…) and as I couldn't follow, I stopped studying (…) The same with computer science. I hated it because I couldn't understand it, man, (…) I couldn't find any logic, nothing there'.*
2. *'Basics of Economic Theory was one of the courses that I liked very much, but also because I could understand it… I liked it because I think it was the only lesson that got a little involved in real life, with goods, consumers… you could see a little bit how the market was rolling, and it all made sense'.*

Making meaning through integration makes sense in terms of one's commitments, but also in terms of an overall sense of worth and fulfilment in a person's life as both require summoning elements and reconstructing them in a comprehensible and satisfying manner [78]. Fry and Wong [70] explained this process by stating that self-reflection and self-awareness are essential for the creation and preservation of meaning. People must be inquisitive and accessible to find meaning in their lives, according to Wong [81]. These claims are also echoed in SDT, as it is claimed that it is important to investigate and challenge oneself and one's reactions to the universe to build the relationships that promote individuality and provide meaning to life. Furthermore, SDT indicates that mindfulness, or free, responsive consciousness, may benefit meaning creation (Brown & Ryan, 2003).

Subtheme 2.3: The role of parents

The participants discussed the ways their families, and especially their parents, supported, determined, or otherwise influenced their career-related decisions. The parents' influence on the careers of their children is quite significant. Supportive parents provide their children with the resources needed and know how to participate in career exploration and import-

ant decisions [82-85]. All the participants reported that their parents, most of the times, actively refrained from openly influencing their choices. However, from the extracts, there may be other, indirect ways in which the family environment might have influenced some of the participants' choices and motivation; for example, a tendency from an incumbent parent who runs a family business to seek a successor in their offspring[86] is described:

Brett

1. *'My parents and especially my mother, adhered to the notion 'do whatever you want and makes you happy, I support you. Whether you want to follow the Greek system or the IB, so be it, just do it''.*
2. *'It was in my family. My mother has a commercial jewellery company, so she has into marketing and advertising'.*

Melina

1. *'In general, they were very supportive, and they motivated me, especially my mother, who used to see me at the dance lessons because she works at this school as a secretary. She watched me over there, with the passion I had for it... So, they were really happy with my decision'.*

According to [87] parental occupation may affect the off-spring's perceived attractiveness on professional choices. In this extract, an evident attempt of parents explicitly trying to influence the participant's decision is reported. However, the latter does not regard this influence as pressure; even though he initially rejects family business continuation as an option for himself, he followingly, accepts it as a possibility:

Rick

1. *'No, I didn't want to work on my father's bakeries. It wasn't for me. Not at all. (…) My sister likes it, and it has worked for her, but not me'.*
2. *'…I kind of abandoned Sports Management... my parents were telling me 'okay, you'd better go for Business Administration, son'. They didn't impose it on me, but they told me better to go that way (...) and I said OK, maybe later I'll take over the ovens, for example, help there too'.*

According to Akosah-Twumasi et al. [88] career congruence between parents and their offspring may signify job security, but this is not considered as an authentic, intrinsic motive. Moreover, the same study revealed that young people adhering to collectivist cultures, are mostly affected by expectations of their families, and career similarity with their parents may positively affect their confidence and self-efficacy in pursuing a career. Greek society is characterised as a collective [89] and

with high rates of uncertainty avoidance [90]. Contrastingly, in individualistic cultures, the main influence is personal interest, signifying more independence and more intrinsic motivation in career-related choices. From the previous extracts, it may be observed that for the participant the model of family business continuation is fulfilled by another member of the family and remains an open possibility for him. It is doubtful, however, if this can be an intrinsic operant[88].

Parental familiarity has been well-documented to have a part in influencing the offspring's behaviour either by role-modelling or by creating learning out-of-classroom opportunities, relevant to the parental occupation [52,91-93]. In the next extract the participant seems to praise his father's self-taught practical entrepreneurial skills, while in a previous theme the same participant acknowledged value in practicality of economics:

Rick

1. *'My father hasn't even finished Lyceum and he's accomplished so many things in his life, he's got three bakeries that keep us going, and it's not just the money. I see him having a global knowledge that a lot of people are jealous of. He's not an expert in anything, but he has a global knowledge of things that knows a little bit of everything'.*

Followingly, he describes his dad as a hard-to-impress person, whose children want to make him proud.

2. *'My dad's opinion counts a lot, as he is a man never says, 'well done'. Never, ever. You have to prove things to him'.*
3. *"At the end of the day, we all want to make our parents proud… nothing else… we want to do something for ourselves obviously, but me and my sister –I don't know how my father did this– we want to make him proud."*

Another participant describes his family as being very supportive, along with different phases of decision-making, towards and through the exam process:

Vangelis

1. *'…and because my father is in the engineering business, and I talked to him, he gave me general guidance. He told me, let's say that mechanical engineers do this, and marine engineers do the other'.*
2. *'I've never had that 'follow your parent's occupation' viewpoint. I liked it as a lesson, and as a path on my own'.*
3. *'(They were)...Very supportive, they trusted me in general, they always trusted me and let me do my stuff. They weren't pushy and on top of me'.*
4. *'On the second exams, I was nervous about chemistry again... once again they told me, (…) "don't you worry now, what happened, happened. We'll see when the grades come out"'.*

By contrasting the two sets of extracts above, two distinct parental styles are described. An openly or covertly controlling parental style, and a more autonomy-supportive one. Both participants reported to have failed in their first attempt to proceed to Higher Education, and both have succeeded the second time. However, it may be assumed that Rick describes mostly extrinsically driven motives, while Vangelis describes mostly well internalised and intrinsic motives.

Discussion

This study aimed to explore motivating and demotivating factors acting throughout the school experience of Greek *Lyceum*Students during their course to Higher Education from an SDT point-of-view.The participants engaged in conversation with the researcher through semi-structured interviews and discussed the role of several factors that influenced them:

The role of Tutors was described as crucial; students expected them to be knowledgeable, supportive, understanding, open to conversation and with a personal approach. The SDT describes these traits as being fundamental to intrinsic motivation and contrastingly points out that punitive and controlling behaviours act in the opposite direction [2].

The *role of Grades* was reported with a great element of *instrumentality,* for attaining some minor (e.g., eliminating parental fuss, receiving material rewards), but also major goals (e.g. entering University).Generally, *Grades* were not perceived as convincing indicators of *competence*. On the contrary, they were perceived as indifferent when not connected to an extrinsic motive (e.g., for parents' satisfaction), and as factors leading to anxiety and stress. These findings also agree with existing SDT-related research.

The *role of experientiality* in modules was also discussed as important and determining for interest and engagement; participants sought novelty, interaction, experimentation and even fun. The SDT relates these needs as direct nutrients for intrinsic motivation.

The role of *Choice* was also discussed. *'Choice'* reflected both the *macro* decision-making process regarding academic and career aspirations, and the *micro* decision-making process regarding picking up courses, and other smaller-scale decisions, relevant but not identical to long term decisions. As such, this subtheme had a wider content. Whichever the perceived meaning might be, having choices seemed to be beneficial to the cultivation of *autonomy*. All participants reported that the ownership of their own decisions enhanced their engagement and motivation.

The next subtheme was the need for *Sense, Utility and Meaning*. The first refers mostly to comprehension of course content, the second to usefulness and utility value of the content and the third to general meaningfulness and congruence to personal beliefs and aspirations. The participants used these terms interchangeably, and even though the methodology of the study was not interpretative but rather descriptive, the researcher made the distinction between the three overlapping terms depending on the context. For reporting reasons, they were collected in a single subtheme. Participants considered all three (or some of the three) as crucial to their motivation, regardless of their actions being extrinsically or intrinsically driven, as long as they were volitional and autonomous.

Finally, *the role of Parents* was discussed. Parenting style according to the SDT is a significant determinant of motivation, mostly related to *Autonomy* and *Relatedness*. The theory posits that in *introjected* forms the two may be conflicting, while in *identified* and *intrinsic* forms they are in congruence. Simply put, actions that are performed only for the sake of *Relatedness* in the form of parental acceptance (e.g. conditional love) may hinder *Autonomy*. Contrastingly, if an action is performed for its *identified* value, or *intrinsically*, then *Autonomy* and *Relatedness* are achieved in harmony[94]. Participants reported mainly the *intrinsic* forms but, in some cases, also the other two were illustrated.

This study has some limitations, apart from the inherent limitations of quantitative researche.g., self-reporting biases, giving socially accepted answers, inability to extract conclusive data etc. The theoretical framework of this study is based on SDT only, thus it reflects a monothematic view on the phenomena under investigation.

Five out of six participants lived in the Athens Metropolitan Area; therefore, their views may differ from students in rural Greece. Also, their socioeconomic statuses (SES) was not assessed; research consistently shows that children from higher SES families may have better academic performance [95]. All participants reported a perceived success in entering Higher Educationin their first or second attempt; the experience of perceived failure or abandonment of goals remains to be explored.

This study contributes to the field of Educational Psychology by outlining some prominent phaenomena described by the SDT, that may influence student motivation. It is an initial attempt to outline the experiences of recent *Lyceum* graduates from an SDT viewpoint. Future research could approach the phenomena outlined in this study in a more detailed manner and by eliminating its limitations.Both qualitative and quantitative methods could be employed.Hofstede et al. [90], suggest that Greek society is mostly collectivistic and

Akosah-Twumasi et al. [88] assert that such societies have a propensity for cultivating extrinsic motivation; considering these claims, it may be assumed that interventions may be necessary for such societies to move away from this tendency, towards a more autonomy-supportive educational approach; tutors, parents, and students could be involved and the cultivation of relatedness, competence and autonomy could be targeted in children and adolescents to promote intrinsic motivation throughout their school experience.

Conclusion

The findings from this study describe ways that teachers, courses, grades, choice, meaning, and parents enhance or thwart intrinsic motivation by cultivating or hindering autonomy, competence, and relatedness in students. These findings may reflect the explanatory, and in many cases, predictive power of Self-Determination Theory; therefore, SDT may be an appropriate theoretical framework to examine and address issues regarding student motivation and autonomy in educational settings through the interactions between students, schools, and parents.

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Appendix 1 – Interview questions

1. Describe to me in whatever words you wish your school years and your experience in school and class in general.
This is an introductory question that aims to get the conversation started and aims to get the participants a general positioning regarding the issue. Along with their actual experience they may also describe school friendships, companions, and playtime. They may also give single-minded comments like 'boring', 'I had a good time' or socially accepted answers such as 'I believe that school was useful, and I liked it'.

2. What did you want to study?
　　a. What led you to this choice / what influenced you?
　　b. When did you remember first thinking of it? When did you make up your mind?
These questions attempt to extract information about the choice of direction. Answers may indicate financial, family (e.g., continuity of family business), circumstances or events. E.g.: "I was impressed by a film", "we went on a visit with the school to a workplace and I liked that particular job", "this specialty was in demand" or even answers such as "the bases were low and I wanted to get a conscription postponement" or "I wasn't sure, so I made a last-minute decision, just to pick up something".

3. Tell me about your family environment. How did they respond to your decision? Did it affect her in any way?
　　a. Which members were positive, and which were negative?
　　b. By what criteria each?
This question attempts to investigate the family context and whether it has affected the participants decision, if it has been supportive or indifferent to any decision. Socially acceptable answers that are far from reality may be given. Follow-up questions may also be needed about which members were positive and which were negative and by what criteria each. There may be answers such as "my mother saw it practically, in relation to my professional future" or "my father told me to do what pleases me".

4. Tell me about your performance in school; elementary, junior high, senior high school and general exams.
　　a. Which courses did you like or interested you the most?
　　b. What do you think attracted you to these lessons?
　　c. Who is a good student to you? What courses do you think you were good at? What do you think made you good at these lessons?

d. **What do you think of grades? What do they mean to you, your people and your teachers?**
e. **What did you think led to this change in performance? (if applicable).**

This question enters into core of academic performance theme. It makes sense to obtain information as a whole, for the entire timeline of the school proces, in order. Numerical or descriptive answers (e.g. "I was a pupil of 15" or "I was good") may also make sense to explore convergences or discrepancies between performance and preference, and an initial attempt is made to explore motivations related to performance, inclinations and talents.

5. **Tell me about your other interests, other than your lessons. E.g. Sports, occupations, hobbies, games, video games etc.**
   a. **Describe me your performance on them**

This question attempts to explore the relationship between motivation and performance in other fields. It can also produce interesting answers about the participant's profile. As extracurricular activities are usually not subject to any obligation (it should be investigated) comparisons and contradictions may arise with the previous question.

6. **Tell me about your tutors.**
   a. **Were there any tutors who influenced you?**
   b. **Did your motivation affect the ability of the teacher?**
   c. **Were there any modules you liked, but the tutor made them unattractive? Or, contrastingly, were there any tutor you didn't like at first, but did the tutor make you see them more positively?**
   d. **What affected your relationship with your teachers?**

These questions attempt to explore the triangular relationship between student-teacher-family. An attempt is being made to investigate whether the teacher himself was an external motive or cultivated the student's inner motivation.

7. **Tell me about the last few years, especially for the year of exams (if applicable)**
   a. **What made you study? What stopped you from studying?**
   b. **Describe to me your feelings during and before exams.**
   c. **What support did you have from your teachers?**
   d. **What support did you have from your family?**

These questions are intended to explore family environment support as well as the incentive and study relationship. It is also investigated whether the result, in the participant's opinion, is subject to internal or external locus of control.