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# A Qualitative Functional Analysis of Academic Procrastination among Irish Undergraduate Students

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# A Qualitative Functional Analysis of Academic Procrastination among Irish Undergraduate Students

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## Abstract

Academic procrastination involves the needless postponement of academic tasks at the expense of one's academic goals. Informed by the principles of Acceptance Commitment Therapy, this study explored students' experiences of academic procrastination in an Irish undergraduate sample. Over two studies, semi structured interviews were used to explore the common scenarios in which students tended to procrastinate, and also the scenarios which by contrast tended to motivate relatively immediate academic engagement. Study 1 involved interviewing twelve participants who had been recruited from online lectures. After noting the potential for self-selection bias in this recruitment strategy, study 2 specifically recruited seven participants in person who were engaging in academic procrastination at the time that they were recruited (i.e., recruited from an on campus recreational room where they were spending substantial time procrastinating their academic coursework). Findings highlighted an important new conceptual distinction between deliberately rationalised forms of academic procrastination (i.e., stories used to rationalise delaying academic work) and more impulsive forms of procrastination involving distraction. The observed interplay between these two types of procrastination not only explains how undergraduate students can become trapped in vicious and systematic cycles of procrastination; but these findings also highlight various ways in which one might interrupt such cycles, and indeed systematically replace them with virtuous cycles of academic engagement. As such, these findings have potentially important implications for the efficient deployment of university resources for both reducing rationalized forms of academic procrastination, and designing learning environments to reduce distraction.

**Declaration page**

I certify that this thesis that I now submit for examination for the award of Master of Arts (Humanities), is entirely my own work and has not been taken from the work of others, and to the extent that such work has been cited and acknowledge within the text of my work. This thesis was prepared according to the regulations for graduate study by research of the Technological University Dublin (TU Dublin) and has not been submitted in whole or in part for another award in any other third level Institute. The work reported on in this thesis conforms to the principles and requirements of the TU Dublin guidelines for ethics in research. TU Dublin has permission to keep, lend or copy this thesis in whole or in part on condition that any such use of the material of the thesis be duly acknowledged.

Signature 

Date 14.11.2022

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# Chapter One
# Introduction

Broadly speaking, academic procrastination involves postponing academic tasks at the expense of one's academic goals. 80 - 95% of students report regularly procrastinating, with 50% describing their procrastination as being problematic (Steel, 2007). Some key consequences of academic procrastination include lower academic achievement (Gareau et al., 2018), university dropouts (Bäulke et al., 2018) academic burnout (Hall et al., 2019), and increased anxiety and distress (Custer, 2018). Procrastination is also to a lesser degree a risk factor for wide range of other mental health diagnoses (Argiropoulou & Vlachopanou, 2022; Constantin et al., 2018).

While isolated instances of procrastination are not necessarily problematic, a particularly harmful feature of procrastination is its tendency to develop into a vicious cycle whereby each postponement of those tasks escalates the uncomfortable feelings associated with those tasks (Oflazian & Borders, 2022; Wäschle et al., 2014). Moreover, as the time remaining to complete those tasks reduces, it can in turn motivate further cycles of postponements until there is little, if any, time left to complete the task at hand. Often when students' procrastinate, they are subsequently forced to rush work or submit their work partially incomplete or incorrect to meet deadlines, preventing them from reaching their full potential (Beswick et al., 1988).

The current study sought to explore undergraduate students' experiences of academic procrastination. Chapter one of this thesis includes a review of the existing literature in the area of academic procrastination and the theories that explain aim to explain it. Chapter 2 outlines Study 1 of the thesis, including the chosen qualitative methodology, the main themes identified and a discussion of these findings in relation to the literature. Similarly, Chapter 3 outlines Study 2 methodology, findings and discussion. Study 2 builds upon the findings of Study 1 by explicitly exploring the perspectives of students more likely to engage in procrastination through targeted sampling. Chapter 4 provides a general discussion of the findings in both

studies in relation to the literature review. The overall aim of this research is to inform educational practices for improving reducing academic procrastination and thereby increasing student engagement by extension.

**Research question:** What are the common scenarios that make students likely to procrastinate and the scenarios that tend to be motivating?

**Objectives:**

**(i)** To explore the common scenarios that make undergraduate students in a technological university in Ireland likely to either

- **A.** engage in academic procrastination or
- **B.** feel motivated to engage in their academic work

**(ii)** To explore students' experiences procrastination and student engagement, in the context of online learning.

# Literature Review

## 1.1 Theoretical conceptualisations of procrastination

Procrastination is characteristically defined in terms of some sort of harmful "delay" or postponement of a necessary task (Steel, 2007). Nonetheless, there are some important differences in the various ways that procrastination, and more specifically academic procrastination, has been defined in the literature. The following paragraphs will outline the characteristics that most definitions have in common, followed by a discussion of some of the different theoretical conceptualisations underpinning those various definitions. Academic procrastination, is a subdomain of procrastination, that is specific to tasks that are required for the purposes of gaining academic qualifications (Steel & Klingsieck, 2016).

Most definitions of procrastination specify that the individual repeatedly postpones a scheduled task despite having at least intermittent awareness of the negative consequences this may have (Grunschel et al., 2018). Procrastination involves an intention–action gap; the person has intentions to do the task, but they struggle to immediately implement these intentions (Klingsieck, 2013; Lay, 1986). Most researchers agree that procrastination involves putting off tasks because they are aversive or distressing to engage with (Sirois & Pychyl, 2013). This distress or discomfort associated with the task is what differentiates procrastination from planned delays that are tactical (Klingsieck et al., 2013). It is also common for students to justify their procrastination by convincing themselves that delaying a task is actually advantageous (more on these rationalizations is discussed below).

Crucially, even if a person is experiencing relatively little distress about postponing academic tasks, most definitions emphasise how it is characteristic of procrastination that in the long run its negative consequences (e.g., submitting an assignment late) outweigh any of its short-term positive consequences. For example, watching Netflix instead of working on a

challenging academic task may temporarily reduce a students' feeling of (di)stress, but if routinely relied upon as a coping strategy it will inexorably lead to negative consequences in the long term, such as failing exams. While most definitions of procrastination have this in common, there are some subtle but important differences in how it is conceptualised in the literature. These different perspectives can be broadly classified as (1) motivational theories, (2) personality theories, (3) cognitive theories, (4) emotional regulation theories, and lastly (5) contextual behavioural science.

According to the motivational perspective, procrastination can be understood as a failure to be motivated. Self Determination Theory explains motivation as being either intrinsic motivation, extrinsic motivation or amotivation (Deci & Ryan, 2012; Ryan & Deci, 2020). Students who are intrinsically motivated (also known as self-determined or autonomous motivation), will do the task for pleasure or interest in the task itself (e.g., a student being motivated to engage with academic tasks because they inherently value what they are learning). If a student is extrinsically motivated, they will engage with an academic task as a kind of a trade-off to gain access to something else more reinforcing; or else to escape from and/or avoid some more aversive stimulus. For example, students are often extrinsically motivated to enrol in university degrees due to coercive pressure from their parents (Deci & Ryan, 2012; Ryan & Deci, 2020). Many studies indicate that students who are intrinsically motivated have lower levels of academic procrastination than those who are extrinsically motivated (Girelli et al., 2018; Malkoç & Kesen Mutlu, 2018). Lastly, amotivation (i.e. the complete absence of both intrinsic and extrinsic motivation or the feeling of being incapable of completing the task; Deci & Ryan, 2012) has also been linked to procrastination (Senécal et al., 1995). Relatedly, self-efficacy (i.e., belief in one's ability to reach specific goals) has a significant role in academic engagement (Bandura et al., 1999; Schunk & Pajares, 2002).

Personality researchers have reported consistent associations between (academic) procrastination and various personality traits. Many procrastination studies consider the 5-factor model of personality when studying procrastination (e.g., (Watson, 2001). These include links between procrastination and higher levels of impulsivity and neuroticism (Steel et al., 2007; procrastination and its relationship with distraction and impulsivity is discussed further in section 1.6.4) Procrastination is also associated with lower levels of conscientiousness (Schouwenburg & Lay, 1995). This perspective considers procrastination as a personality variable that exists within the individual and investigates individuals who procrastinate regardless of the situation (Klingsieck et al., 2013). This perspective disregards external factors influencing procrastination. The measures used in personality research on procrastination do not account for differences in context. Personality researchers tend to assume that individual differences in the tendency to procrastinate are relatively heritable and stable across lifespan (e.g. Kim et al., 2017; Schouwenburg & Lay, 1995). By focusing on personality variables, researchers may have disregarded the contextual malleability of procrastination; and therefore, disregarded practical opportunities for reducing procrastination and increasing engagement via contextual design (Hailikari et al., 2021).

In reality, people often procrastinate in some scenarios, but not in others, depending on the context – and their psychological history in that context. For example, most students tend to procrastinate some aspects of their course work and not others (e.g., procrastinating essay writing but feeling motivated to complete more practical assignments; Koppenborg & Klingsieck, 2022). Klingsieck (2013) considers both personality and context in their conceptualisation of procrastination by offering two different classifications of procrastinators. According to Klingsieck, an individual can be either a chronic procrastinator or a situational procrastinator (2013). Chronic procrastination refers to one's likelihood to procrastinate in

many aspects of life. In contrast, situational procrastination is the tendency to have constant procrastination in just a specific situation or aspect of life.

Similar to the personality perspective, the cognitive standpoint traditionally conceptualizes procrastination as existing within the person relatively independently of context, rather than in terms of malleable functional relationships between cognition and context. Cognitive theories usually conceptualize procrastination as an irrational tendency to delay beginning and/or completion of tasks (Senécal et al., 2003a; Steel et al., 2018). This is not a holistic person-centred definition. The term "irrational" used in cognitive psychology, implies that some thought processes are universally good, and some are universally bad. This is a potentially stigmatizing and indeed counterproductive way of conceptualizing procrastination. In fact, procrastination is in some ways, a rational and functional strategy; in that it helps the student avoid uncomfortable feelings associated with a task in the short term; even while in the long term it undermines personally valued goals such as academic success. In relation to interventions for targeting procrastination, interventions derived from Cognitive Behaviour Therapy (CBT) aim to help the individual reframe "unhelpful" patterns of thinking (e.g., Wang et al., 2015). By contrast, attempts to directly control or suppress discouraging thoughts associated with disengaging from an academic task, can in fact compound those thoughts (Arch & Craske, 2008). As such, much like personality researchers' conceptualization of procrastination, the classical cognitive point of view does not take into consideration an individual's context (i.e., both the antecedents and the consequences of the procrastination behaviour).

One of the most common explanations for procrastination is the idea that postponing academic tasks serves as a short-term emotional regulation strategy, even if it undermines long-term goals (van Eerde & Klingsieck, 2018). This theory emphasizes procrastination as an attempt to regulate uncomfortable feelings associated the task. Tuckman and colleagues

conceptualised procrastination as “a lack of self-regulated performance” (1991, p. 473). The emotional regulation perspective is the key to understanding procrastination. This perspective argues that procrastinators tend turn their attention to experiences that are more immediately and emotionally rewarding in an attempt to regulate their negative moods (Blunt & Pychyl, 2000). In other words, students may repeatedly temporarily postpone academic tasks as a means of avoiding uncomfortable thoughts and feelings arising from the prospect of attempting those tasks (e.g., feeling inadequacy, embarrassment or shame). This perspective is related to emotional intelligence; the ability to process emotions, as well as express, regulate and manage them (Brackett et al., 2006). There is evidence that emotional intelligence can help students to regulate the thoughts and feelings that may be preventing them from engaging in academic work (Hen & Goroshit, 2014).

Lastly, the contextual behavioural science (CBS) perspective focuses on procrastination evoked by contextual features (Biglan & Hayes, 2016; Hailikari et al., 2021). The CBS perspective is in keeping with the emotional regulation perspective in many ways, however it emphasises that in order to understand procrastination behaviour, importance should be placed upon the functional relationships between an individual’s procrastination behaviours and their respective contexts (Zettle et al., 2016). The etymology of the word context implies an interwoven story where the meaning, or function, provided by that story is more than the sum of that story’s parts. This approach states that, procrastination is multifaceted, and it manifests differently depending on the life experiences of the person in each given context (Biglan & Hayes, 2016). This perspective conceptualises procrastination as a verbal/language-based behavioural phenomenon that depends on situational factors (Eisenbeck et al., 2019). In other words, this approach emphasises the importance of examining the function of procrastination behaviour in terms of its changeable relationship with its contextual antecedents and consequences; including those that are verbally formulated (Biglan & Hayes, 2016). According

to this perspective, two behaviours may be ostensibly the same in a topographical sense but have different meaning and function differently depending on the context. For example, two individuals may delay completing their essay to go out socialising with their friends - but whereas one may have done so tactically having already made good progress with it, the other may have done so because they were increasingly intimidated by a task following repeated postponements. Although both individuals' behaviour was superficially similar, a wider consideration of context reveals different functional relationships with context. The latter individual may in fact be intimated for many functionally different reasons requiring different contextual interventions. Rather than attempting to define procrastination in absolute terms, with respect to some set of processes/factors that are assumed to be largely independent of context; ultimately, in order to understand a student's procrastination behaviour on an individual level, it is thus necessary to understand the contextual function it serves (Biglan & Hayes, 2016). Non-contextual perspectives can still be useful in highlighting different aspects of procrastination for functional analysis. However, the research on procrastination to date has generally not yet coordinated these different approaches (motivation, personality, cognitive and emotional regulation) with the functional contextual approach of Contextual Behavioural Science (CBS; CBS is a meta-theoretical perspective that incorporates a wide variety of both qualitative and quantitative research). These perspectives have not yet been brought together, whether using qualitative or quantitative methods, to explore students' experiences of procrastination. The current research thesis aims to begin bridging this gap.

### 1.2 Qualitative Research on Procrastination

This section highlights the main insights that have already been established within the existing qualitative research literature on procrastination. The majority of research on procrastination has been quantitative and therefore the existing qualitative research on academic procrastination is relatively limited (Klingsieck et al., 2013). Nonetheless, it has

provided some important insights into key contexts for academic procrastination, with a particular emphasis upon situational and social aspects of procrastination.

A highly cited study by Schraw et al (2007) investigated antecedents and consequences of academic procrastination through interviews with students described as "*successful procrastinators*" (p. 24). The authors highlighted what students consider to be adaptive aspects of procrastination. 60 students were interviewed on their experiences of procrastination. From this, the researchers proposed a preliminary paradigm model after conducting a grounded theory study. Researchers concluded that procrastination can be adaptive or maladaptive. Some respondents said that they procrastinated for adaptive reasons and rarely felt that it negatively impacted their learning. They reported that students sometimes procrastinated intentionally. They said that putting something off until the last minute often improved quality and efficiency. Students described how added stress and tension were necessary components that enabled them to perform at peak efficiency. This echoes Yerkes-Dodson Law which emphasises the importance of a certain amount of stress to motivate the individual to perform efficiently (Yerkes & Dodson, 1908). This is a perspective that would not have been gained without asking students about their experiences, through interviews. Therefore, qualitative research can provide an insight into subtleties of an apparent harmful behaviour that quantitative research overlooks.

In Schraw et al's study, the majority of students considered procrastination as something positive (2007). They said that procrastination contributed to their sense of "flow" at a later stage, which refers to a state of complete absorption in a activity (Csikszentmihalyi, 2000). Some students are motivated by time pressure and are able to complete tasks before deadlines and still achieve satisfactory outcomes (Choi & Moran, 2009; Chun Chu & Choi, 2005). However, there are arguments that these students may perform adequately in spite of procrastination not because of it (Grunschel et al., 2013). Some perspectives view

procrastination as being beneficial, in that it can be better to put off some tasks. For example, delaying replying to an email until a more advantageous time. However, tactically delaying a task is different to procrastination and this positive definition is less popular in the literature. Klingsieck (2013) makes a distinction between procrastination and delays that are strategic and argues that these two definitions should be seen as distinct. Corkin et al. (2011) also argued that Schraw et al.'s findings apply to functional forms of delay, rather than academic procrastination. Corkin (2011) claimed that academic procrastination, by definition, cannot be associated with success. Students in Schraw et al's (2007) study also mentioned how a combination of different factors causes their procrastination, rather than just one in isolation. Quantitative studies can often measure just one factor (e.g., time management or self-efficacy) to determine how it predicts procrastination. In reality, procrastination is often affected by a variety of different contextual factors. For example, a students' environment, their learning history and their identity, all factors which can contribute to a tendency to procrastinate (Steel, 2007). Therefore, qualitative studies can reveal some subtle aspects of procrastination as a behaviour that are not generally explored in quantitative research.

An important qualitative study by O'Neal's (2016) highlighted the experiences of first generation Latino American college students. O'Neal (2016) reported that the majority of the sample had at least one or more part time jobs, which increased their levels of stress in juggling work and academics. They reported that part of their grit stemmed from their families and communities (2007, p. 1089). Participants in O'Neal's study described the social pressure to perform well academically stating that with "*Latinos you see a different passion because they are not just students for themselves but for their future families and their friends*" (2016, p. 460). In this way, students were motivated to engage with their academic work in order to resist stereotypes, overcome challenges, and make their families proud, especially because they would be the first in their families to graduate from college (O'Neal et al., 2016). Students from

minorities often have additional barriers when it comes to and their motivations for completing the course (Carey, 2019). Similarly, a highly cited paper by Duckworth et al. define grit as "perseverance and passion for long-term goals. In this way qualitative research can explore important contextual factors that affect a students' tendency to procrastinate, factors that can be overlooked in quantitative research. Therefore qualitative research can help to understand the contextual factors affecting a students' tendency to procrastinate.

### 1.3 The Need for a Functional Analysis of Procrastination Behaviour

To understand procrastination, it is necessary to understand the function of the behaviour. The term "functional analysis" refers to any empirical demonstration of a cause-effect relation (Baer et al., 1968). Functional analysis methodology is not new and has been widely used in clinical research. First coined by Skinner, the term functional analysis has a fundamental position within behaviour analysis (Iwata & Dozier, 2008). Skinner used the term to describe how contextual factors influence behaviour. The aim was to "*predict and control the behaviour of the individual organism*" (Skinner, 1953, p. 35).

Descriptive analysis (observing the behaviour) does not provide the functional properties of events or the functional relationships among the events (Biglan & Hayes, 2016). However, descriptive analysis can provide clues about where to begin looking at functional relationships. In other words, simply observing procrastination behaviour is not sufficient to understand it. Furthermore, descriptive analysis does not provide us with differences about social contingencies, (escape vs attention) that maintain problem behaviour (Lerman & Iwata, 1993). Ongoing behaviour, such as procrastination has a function based on its history of reinforcement. Whatever behaviour has been helpful in the past develops into a habit, (i.e., avoiding a task has proved effective in avoiding uncomfortable feelings associated with it, meaning the individual is more likely to develop this habit). The goal of functional analysis is

to determine which sources of reinforcement are responsible for problem behaviour for the individual (Iwata & Dozier, 2008)

Behaviour analysis involves examining how different contextual factors (both antecedent and consequences) influence behaviour (Zettle et al., 2016). In relation to procrastination, this involves examining what situations occurred before the procrastination behaviour and occurred after. Antecedent events that occur before a problem behaviour serve as potential Establishing Operations or EOS (Laraway et al., 2003). A functional analysis is conducted using the acronym ACB; Antecedent, Behaviour Consequence (Ramnero & Torneke, 2008). The focus is on the behaviour that is being analysed (B) (e.g., delaying the task), how it relates to the consequences that follow (C) (e.g., handing in an assignment late/ receiving a low grade), and the antecedent (A) what came before (e.g., reading the class group chat messages about the assignments and feeling intimidated). Contingency is the relationship between two events, with one being "contingent" or a consequence of the other event. Academic behaviour, like all human behaviour is shaped by contingencies (Iwata & Dozier, 2008) To do a functional analysis, the task is to interact with the participant or client in such a way that the client will report phenomena only observable to themselves (i.e., their private thoughts and feelings; Krieg, 2020) Therefore, to understand procrastination, like any behaviour, it is important to consider the antecedent, the behaviour itself, and the consequence, through a functional analysis.

### *1.3.1 Acceptance Commitment Therapy's Conceptualisation of Procrastination*

Acceptance Commitment Therapy (ACT), stemming from Contextual Behavioural Science (Hayes et al., 2012), is an effective model for helping students to accommodate the uncomfortable feelings that sometimes arise when they are attempting to engage in their academic work. ACT is a process-based, third wave therapy which has shown its effectiveness

in a broad set of psychological problems from anxiety and insomnia to chronic pain (Hooper et a., 2015). Psychological flexibility is constructed of six core psychological processes, namely, cognitive defusion, contact with the present moment, acceptance, self-as-context, values and committed actions (Hayes et al., 2012). ACT does not focus on attempting to eliminate or suppress emotions around engaging with an academic task but instead encourages the student to accommodate these uncomfortable feelings through a range of techniques. Psychological inflexibility can be conceptualised as a risk factor for procrastination and psychological flexibility as a protective factor against it (Gagnon et al., 2016). ACT places great emphasis on the context in which a behaviour occurs, for example how students are more likely to procrastinate in certain scenarios than others. An individual's learning history defines the function of the situation and their behaviour changes depending on the particular context (Biglan & Hayes, 2016). In other words, there may be some situations where the student is highly motivated and other situations where they are more likely to engage in procrastination. Acceptance Commitment Therapy stems from Contextual Behavioural Science (CBS), (Hayes, 2013), which is an approach to psychology and science more generally with a core focus on action in context (Hayes, Wilson et al., 2012). The CBS approach is compatible with qualitative research methods, in that context, by definition, is at the heart of qualitative research (Zettle et al., 2016)

The philosophical underpinnings of this research is functional contextualism, the underlying philosophy of Acceptance Commitment Therapy. Functional Contextualism is grounded in functional analysis (Biglan & Hayes, 2016). In this approach, emphasis is placed on the *context* instead of content, focusing on the contextual rather than mechanistic perspective. Functional contextualism has three goals: to understand, predict and influence behaviour (Hughes & Barnes-Holmes, 2013). Contextual behavioural science places emphasis on scope in research, to encompass a wide range of behaviours across multiple different

situations. The functional perspective is interested in all types of behaviour, publicly observable and private behaviour, including how the self can be conceptualised (i.e., inside and outside the skin; Zettle et al., 2016).

### *1.3.2 Procrastination and the Conceptualisation of Self*

From the perspective of Acceptance Commitment Therapy, the concept of self is socially constructed (Amineh & Asl, 2015). A person's learning history determines the function of procrastination. How a person was brought up affects their conceptualisation of themselves. The root of many clinical problems are self-related issues (McHugh, 2015). A students' environment and their interactions, shapes how they conceptualise themselves. A student views themselves through the eyes of others and makes social comparisons e.g., a student from a community where it is not the norm to go to university may have a self-story about themselves that they are not the type of person to do well academically (Amineh & Asl, 2015). How students view themselves is an extension of how others treat them. Procrastination is related to stigmatisation; feeling safe and secure socially allows students to be prepared to make mistakes. There is shame associated with not performing as well as peers (Oades-Sese et al., 2014).

A students' conceptualisation of themselves is powerful in determining how they engage with their academic work. For example, a student may be fused with beliefs they have about themselves and their own competency. Rigid conceptualisations of self are problematic and inflexible to change (Murthy et al., 2021). Procrastination can come about as a tactic to ignore the uncomfortable feelings that arise related to someone's conceptualisation of themselves. Students use procrastination as a short-term mood regulator for the uncomfortable feeling caused by fusing with uncomfortable feelings. However, this maladaptive strategy leads to aversive outcomes in the long term (i.e., a student is left with less time to complete their

work, affecting their grades and causing more stress). Procrastination can be understood from the psychological flexibility perspective as fusing with private events (thoughts) and wanting to avoid these uncomfortable feelings (Scent & Boes 2014). This cognitive fusion happens when a person's private events e.g., thoughts exert strong influence on an individual's subsequent responding, narrowing his or her available repertoire of actions (i.e., psychological inflexibility).

## 1.4 Factors Influencing the Likelihood of Academic Procrastination

From a review of both quantitative and qualitative literature, typical scenarios were identified that make students' likely to engage in procrastination. After identifying populations most at risk of procrastination, this section will review both current and historical risk factors (i.e., a student's life experiences and learning history) for procrastination. There are many different factors that influence students' likelihood to procrastinate. Each factor will be discussed individually below.

### 1.4.1 *Demographic factors*

Although procrastination exists across society and appears to affect most individuals to some extent (Steel, 2007), important differences exist across populations. This reflects the underpinning of ACT that emphasises how contextual factors influence behaviour (Hayes, 2006). The literature reveals that some groups that are more at risk of procrastinating than others, which will be discussed below.

Gender has not been reported to be a factor in procrastination. Although some studies have found greater levels of self-reported procrastination among males (Steel & Ferrari, 2013) gender differences are not consistent across the literature (Özer et al., 2009). Similarly, there is not conclusive evidence that certain age groups are more likely to procrastinate. While a highly cited study by Beswisk et al. (1988) observed that older students (commonly referred to

as mature students) were more likely to procrastinate than younger students, more recent research indicates that postgraduate students were observed to procrastinate more than undergraduate students (Rabin et al., 2011). Although the literature tells us that procrastination does not seem to occur more in some groups than others, it is still important to consider that it may manifest differently for older students (i.e., their learning history is different, and education has changed a lot since they first attended formal education). It is important to consider how procrastination may manifest differently for different age groups. Askham (2008) conducted interviews with 30 mature students. They found for older learners re-entering education, some of their negative past experiences of learning impacted their studies in higher education. They highlighted the importance of teaching staff in higher education settings being aware that mature students may have negative learning experiences in their past (Askham, 2008). As a result, this experience of trauma, can translate to the urge to avoid dealing with the uncomfortable feelings associated with academic work.

Data also reveals socio economic gaps in procrastination behaviour. There is a disparity in academic achievement between students from high and low socioeconomic backgrounds (Sabnis et al., 2022). Chronic adversity and distress above a certain threshold will narrow focus in unhelpful ways interfering with learning (Lovallo, 2013). This can contribute to frustration, leading to procrastination behaviour and reduced academic performance. Sabnis (2022) found that compared to their classmates, racial minorities and first-generation college students had significantly higher levels of procrastination behaviour. First generation college students are at a disadvantage in relation to basic knowledge about higher education (such as applications and costs) compared to peers whose parents have attended higher education (Pascarella et al., 2004). There are long standing patterns of lower graduation rates and lower levels of persistence among first generation college students and those from underrepresented groups such as ethnic and racial minorities (de Brey et al., 2019). This observation is worrying,

particularly when it is clear that these groups have additional barriers to overcome in relation to engaging with education (Carey, 2019). There is evidence that students from minority backgrounds experience increased anxiety related in educational settings due to the stereotypes (Spencer et al., 1999). Sabnis et al., (2022) makes the argument that this creates a negative feedback loop where by experiences of stigma can in turn lower levels of self-efficacy and increase anxiety which can lead to procrastination (Cohen & Garcia, 2008; Lindsley et al., 1995). Rather than it being a failure on part of the individual, procrastination can be a symptom of systemic issues in education and society (Sabnis et al., 2022).

Similarly, students with learning disabilities are a group that can be at risk of procrastinating related to frustration while attempting to engage in academic work. There are now almost 10,000 students with Disabilities in Higher education in Ireland representing 4.7% of the total student body (Ahead, 2021). These can include neurodevelopmental diversities, physical disabilities or learning disabilities. Learning disabilities can be defined developmental disorders that emerge in childhood but develop into adulthood, such as dyslexia (Bruce & Aylward, 2021).

Students with learning disabilities often suffer with more social and academic difficulties in higher education (Klassen et al., 2013). Some social factors associated with having a disability can impact levels of procrastination. If a students feel like an outsider, this can create internalised stigma which can contribute to disengagement (more on stereotype threat discussed below). There is also evidence that individuals with learning disabilities experience lower self-esteem than their peers (Andreassen et al., 2017).

Students with learning disabilities are sometimes not prepared for the academic demands of higher education and can become overwhelmed (Klassen et al., 2013). A recent study on procrastination in student with learning disabilities, found that learning disability moderated the effect of academic procrastination on achievement (GPA), meaning the negative

effects of procrastination were stronger for students with learning disabilities (Goroshit & Hen, 2021).

What's more, students who fall into a number of the at-risk groups can be particularly vulnerable in the education system. For instance, mature students who also have learning disabilities. Out of all mature students in Ireland participating in higher education, mature students with disabilities makes up 12% of the group (Ahead, 2021). Riddell and Weedon's (2014) study highlighted how students with disabilities who are also mature students can be particularly at risk of disengagement. In this study one interviewee with dyslexia described how she was made to feel intellectually inferior by teachers when in school in the 1980's/90s. These kinds of situations can make a student particularly vulnerable to feelings of incompetence, which is linked with procrastination (Klassen et al., 2008a)

The above evidence highlights how particular background factors can make a student more at risk of procrastinating than other students. One of the key reasons why students from socially excluded/disadvantaged backgrounds procrastinate is due to the stigmatization that they experienced in their learning history (for example at school) which in turn leads to psychological avoidance in college.

### *1.4.2 Scenarios involving feelings of self-doubt and inferiority*

Feelings of self-doubt about one's own academic abilities can contribute to a desire to avoid engaging with the task at hand. Tasks that are challenging (so-called task aversiveness), strongly predicts students' procrastination (Blunt & Pychyl, 2000). However, in order to learn and grow it is necessary to be able to overcome challenging aspects of course work (Shuell, 1990). The negative relationship between procrastination and self-esteem and self-efficacy has been well documented (Ferrari, 2001). Individuals who are lower in self-esteem, are more likely to procrastinate (Steel, 2007). Self-efficacy refers to an individual's belief in their own

capabilities to learn new things and complete given tasks successfully (Bandura et al., 1999). Low academic self-efficacy beliefs are associated with an increased tendency to procrastinate (Klassen et al., 2008a). According to Park & Sperling, (2012) college students who have higher levels of academic self-efficacy also tend to have greater management of their time and study environment. A study by Jeffords et. al. (2020) suggested that psychological flexibility is closely related to self-efficacy. Students who reported greater psychological flexibility, also reported feeling efficacious in their ability to complete their studies. In contrast, students who reported greater inflexibility, reported feeling less efficacious. Conversely, students who believe they can and will do well are more likely to be motivated to self-regulate, persist and engage in studying (Zimmerman, 2000). For many students, these feelings of incompetence and inferiority can stem from how others interact with them. For example, a student who enters university from second level education and has become accustomed to teachers speaking to them in a certain way, may believe that lecturers will reprimand them for making mistakes. This may develop in to a vicious cycle of shame (Martinčeková & Enright, 2020). Many studies indicate that shame is positively associated with procrastination (Fee & Tangney, 2000).

Shame and self-blame are maladaptive strategies for dealing with academic stress and can exacerbate the issue further (Madhyastha et al., 2014). Zhang (2018) and colleagues suggested that educators should provide frequent feedback and positive reinforcement on undergraduates' academic engagement and help them form rational cognition on failure. They also suggested that ACT might be helpful to decrease fear of failure and reduce academic procrastination. Relatedly, there is strong evidence for the association of perfectionism and procrastination. According to Ferrari, (1992) perfectionists are motivated by anxiety about what other people think of their performance and their procrastination is related to self-presentation and how they will appear to others.

Procrastinators tend to have a high level of "*automatic negative thoughts*" (Flett et al., 2012, p. 223). They have higher levels of self-depreciation and negative thoughts about themselves and others when compared with non-procrastinators (McCown et al., 2012). Flett (1992) suggests that individuals who have a fear of failure may have been criticised harshly by others. According to Flett, individuals who consistently underperform tended to internalise a negative view of themselves and tried to avoid any situation where they would be evaluated by engaging in procrastination (1992). As a result, students can then attribute their failure to a lack of effort rather than ability (Flett et al., 1992). Similarly, a study by Michałowski et al, (2017) reported that participants who procrastinated more were much more sensitive to being reprimanded than their non procrastinating colleagues. Self-stories can be limiting and are associated with psychological rigidity. Through acceptance commitment therapy techniques, students can learn how to create distance from their thoughts of self-doubt and incompetence. Self-compassion was shown to mediate the relationship between trait procrastination and stress (Sirois, 2014). Self-compassion refers to three main components: self-kindness, common humanity, and mindfulness (Neff, 2003). Self-compassion has also been said to complement Acceptance Commitment Therapy (Luoma & Platt, 2015)

Stigma and social factors can have an influence on procrastination and engagement. Research on stereotype threat by Steele & Aronson (1995) highlighted the affect that stigma has on minority learners. This refers to situations where an individual feels they are at risk of conforming to the stereotype of their group. For example, when an individual may be worried that performing badly on a test will confirm others negative beliefs about the intelligence of their race, gender, culture, ethnicity, or other forms of identity (Steele & Aronson, 1995). In this way stereotype threat can be related to procrastination and engagement.

### *1.4.3 Scenarios involving mood regulation*

Some students may believe that they will not be able to work effectively on a given academic task until they feel only/mostly positively about it. However, for the most part, the longer an academic task is postponed, the more likely that task is to distress the individual (Scent & Boes, 2014). For many students, beginning the academic task is the most challenging part (Warburton, 2020). They desire to perform well but may self-jeopardise themselves in doing so. In this way, when students procrastinate it is often an attempt to improve their mood in the short term at the expense of their long-term values, such as pursing third level education (Sirois & Tosti, 2012; Tice & Bratslavsky, 2000). In an attempt to feel better in the moment and regulate uncomfortable feelings associated with a task (e.g., feelings of self-doubt or perfectionistic thinking), students often avoid the task at hand. By consciously trying to reverse or oppress negative experiences it can instead exacerbate them (Hayes et al., 2006). Procrastination can be viewed as a form of experiential avoidance (also known as psychological avoidance), which is an unwillingness to encounter unpleasant experiences. These attempts to control internal experiences can exacerbate distress and prevent us from engaging in meaningful behaviour in line with our values (Hayes-Skelton & Eustis, 2020). A student may try to avoid the uncomfortable feelings associated with a task or find it hard to deal with these feelings of "I'm not good at writing" or "I can't do statistics". Procrastination is related to lower levels of acceptance (Glick & Orsillo, 2015). Glick and colleagues (2015) found that the combination of acceptance, mindfulness (similar to contact with present moment) and values added to the prediction of procrastination over trait anxiety.

In ACT, students are taught to defuse from negative thoughts such as perfectionistic thinking or critical self-thoughts using various therapeutic techniques (Dionne, 2016). For example ACT teaches students who have thoughts such as "I am bad at writing essays", to learn to create some distance from the thoughts (e.g. "I am aware that I'm having a thought

that I am bad at writing essays") and move towards values in spite of these uncomfortable feelings (e.g. "I'm aware that I'm having these thoughts but I will start to write my essay as education is something that is important to me"). Fusion with thoughts can occur without the individual being aware and is described in clinical functional analysis as "*responding in coordination with a particular response of your own*" (Törneke, 2021 p.5 ). It can occur without the individual being aware. In contrast, defusion is "establishing an operation distance" to a person's own responding (García- Zambrano et al., 2019; Törneke, 2021). Instead of responding to our responses (cognitive fusion), students should respond hierarchically, which means to discern the response as being separate to themselves (Foody et al., 2013).

### *1.4.4 Scenarios involving impulsivity and learned coping behaviours*

Procrastination is closely associated with impulsive behaviours (Steel, 2007). Those who exhibit higher levels of impulsivity are more prone to procrastination ( Zhang et al., 2019). In a meta-analysis conducted by Steel (2007) on the relationship between impulsiveness and procrastination, a significant correlation was found between the two with the coefficient ranging from .30 to .50. This indicates the strong association with impulsive behaviour and procrastination.

Impulsivity is an adaptive behaviour that individuals may learn to help them survive in situations. Evolutionary science argues that individuals learn behaviours to help them cope with unpredictable environments (Fenneman & Frankenhuis, 2020).Therefore, impulsivity can be related to upbringing. For instance, in some environments, it may be necessary to act fast rather than slow logical decision making. There are many studies linking impulsiveness with lower socioeconomic status (SES) (e.g. Sheffer et al., 2012). Studies on Adverse Childhood Experiences ACES (i.e. traumatic events that occur in childhood; Petruccelli et al., 2019) have also been linked to higher levels of impulsivity (Shin et al., 2018). Chronic distress and

adversity can make an individual more impulsive by narrowing their perspective (Lovallo, 2013).

Delay discounting is a related adaptive behaviour that can be developed through an individual's learning history. Delay discounting refers to the decrease in subjective value of an outcome as the time to its receipt increases (Vanderveldt et al., 2016). According to delay discounting, in some scenarios, individuals tend to have a preference for smaller, immediate pleasurable activities instead of the larger, delayed pleasurable activities (Vanderveldt et al., 2016). Reinforcers lose value when they are delayed (Commons et al., 2013) and reinforcers from academic studies are typically delayed. Delay discounting correlates with many problem behaviours. Steeper discounting is associated with negative outcomes such as substance abuse, problem gambling and obesity (Bickel et al., 2012). Research on delay discounting usually involves offering participants a series of choices between smaller sooner items and larger but delayed rewards. Selecting the first would be seen as impulsive but the second would be seen as exhibiting self-control. Events that are further away in time have less impact on an individuals' decisions. Therefore, when the deadline or the consequences are far away, it is more tempting to procrastinate (Schouwenburg & Groenewoud, 2001). In relation to academic work, students are faced with a choice or trade off (Olsen et al., 2018). One option is to engage with the academic task in order to achieving academic and career goals (that usually align with the students' values). However, these rewards are not instant. The alternative (delaying the task through procrastinating) may produce immediate, positive reinforcers from taking part in social or leisure activities.

A paper by Sutcliffe (2019) explored the relationship between procrastination, psychological flexibility and delayed discounting. The only measures significantly correlated were psychological flexibility and procrastination, with a negative correlation ($r = .38$). This is further evidence that psychological inflexibility contributes to procrastination. However

previous studies have made a link between delay discounting and procrastination. Delay discounting rates depend on the choice domains in which they are measured (Chapman & Elstein, 1995) therefore it is important to explore the role of delay discounting in particular choice domains of interest. Sutcliffe (2019) suggested that directly measuring delay discounting in the academic domain would help to determine whether there is any contribution of delay discounting of academic outcomes to procrastination within the academic domain.

### *1.4.5 Scenarios involving a lack of awareness or contact with the present moment*

Some students may lack self-awareness and struggle to acknowledge their own behaviour. According to Skinner, "*a person who has been made aware of himself by the questions he has been asked is in a better position to predict and control his behaviour*" (Skinner, 1974 p. 34). Procrastination is associated with a lack of contact with the present moment. Contact with the present moment refers to the ability to be present and mindful of thoughts, feelings, and sensations (Hayes et al., 2012). A lack of awareness of time passing may look like time spent scrolling on social media without an awareness of how much time has passed. In fact, social networking sites have specifically been identified as a key facilitator of procrastination, partly due to the way they are designed to encourage complete immersion (Alblwi et al., 2021). Studies also indicate that smartphone usage increased during the pandemic as students were more reliant on their phones for maintaining social contact with others (David & Roberts, 2021). This likely contributed to a more distracting environment, increasing the temptation to procrastinate.

The relationship between inattention and procrastination is well established. Inattention is related to mindlessness and a lack of contact with the present moment (Sirois & Tosti, 2012). "Becoming aware of (or discriminating) your own behaviour is the key to changing your behaviour (Törneke, 2021, p. 81). Mindfulness is a component of the

psychological flexibility model. Pychyl and Flett, (2012) highlighted the role of attentional control variables such as mindfulness for the reduction procrastination. Results from a correlational study by Sirois and Tosti, (2012) using three different measures of mindfulness revealed lower levels of mindfulness were associated with higher levels of self -reported procrastination. In addition, mindfulness was shown to mediate the relationship between procrastination and perceived stress.

Similarly, there is overlap on the traits of ADHD and procrastination (Niermann, & Scheres, 2014). Both procrastination and ADHD are associated with lower levels of executive functioning. Executive functioning is defined as the organisation of materials, planning, organising, and task monitoring (Gioia et al., 2000). These are all necessarily skills for engaging in academic work, which can be related to higher levels of procrastination (Rabin et al., 2011). A recent study by Rinaldi et al., (2021) reported that undergraduate students who showed an impairment in executive functioning also reported difficulties with procrastination. An aspect of academic procrastination that has not yet been widely explored is its conceptualisation as an impulsive, positively reinforced behaviour (i.e., situations where the student is being pulled away, or distracted from their academic work). In these situations, a student may not be avoiding uncomfortable feelings associated with an academic task but may instead become distracted and drawn towards a distracting stimulus. A large body of research on impulsivity (Reimers et al., 2009) and inattention (Bolden & Fillauer, 2020) bolsters this conceptualisation of academic procrastination as a positively reinforced behaviour (i.e., moving towards distractions).

### *1.4.6 Scenarios involving a lack of routine or competing demands*

Establishing routine and building habits around completing coursework is an important skill to develop as a university student. Motivation as a resource is finite (Cameron, 2001).

Time management is a common problem for students (Parpala et al., 2017). Many students' study without study schedules and then fail to pass the courses because they run out of time to prepare, such as for exams (Asikainen et al., 2013). There have been a lot of interventions aimed at reducing procrastination that have focused on improving time management skills (e.g., Levrini & Prevatt, 2012) A recent paper from Hailikari and colleagues suggested that time and effort management and psychological flexibility are closely related and appear to go hand in hand and, thus, both need to be considered when the aim is to reduce procrastination (2021). Studies previous to this considered time management different to psychological flexibility however Hailikari makes the argument that the two concepts are connected. Results showed that students' ability to recognise their time and effort had the strongest association with procrastination. Explaining procrastination as purely a time management issue, does not take into account persons' internal experiences (Glick & Orsillo, 2015). Scenarios involving competing demands; balancing work, college and family responsibilities can have an effect on procrastination. Many students need to balance part time jobs during their studies. In Morris et al's (2021) study on students' experiences during the pandemic, they found that students were often caught between demands of course and family, which affected their academic engagement. Similarly, students on placement must balance assignments and placement commitments. In a study in University Limerick, researchers interviewed midwifery students on their experiences of internship (Bradshaw et al., 2018). In the study, participants described the difficulty in maintaining a work life balance while juggling academic and practice commitments with long shifts.

Strategies for effective time management that have been highlighted in the literature include the pomodoro method (i.e. a time boxing technique involving 25 minutes of study followed by 5 minutes of break; Cirillo, 2018) and the use of SMART GOALS (i.e. goals that are Small, Measurable, Attainable, Realistic, Time-bound; Gustavson & Miyake, 2017). Both

of these techniques reflect the concept of being rewarded for small achievements which can be motivating. Goal Setting Theory reflects this concept of feeling a sense of accomplishment after doing micro tasks, which can build momentum and increase motivation (Locke et al., 1981).

### *1.4.7 Scenarios involving reduced social and peer support*

Establishing social support is an important aspect of student engagement and wellbeing. Studies have highlighted the importance of a feeling of belonging as for student retention (Hoffman et al., 2002; Strayhorn, 2018).

Support systems are integral to successful integration to university. In a (2013) study by Denovan and Macaskill, first year students were interviewed on their experiences of adjustment to university life. They reported that the absence of a support group affected students' adjustment to university, whereas having good support helped students to feel that they were fitting in to their new environment. In Bradshaw et al's (2018) study on student midwifes during internship, the importance of social supports was also emphasised. In the study, participants described the support of their peers as being crucial to their survival, knowing that they were not alone facing challenges. Participants described how shared experiences caused an increase in social support and contributed to a stronger sense of social identity (Bradshaw et al., 2018). Peer support is also importance for understanding aspects of the course material and clarifying difficult concepts (Mishra, 2020). . Various studies indicate that a lack of peer support predicts lower GPA (Altermatt, 2019). Peer support can also be motivating for individuals and create a sense of accountability (Larson et al., 2018).

However, there is also evidence that classmates can interfere with engagement and can be a source of distraction. A study by Frisby et al., (2018) highlighted how districting behaviours (such as arriving late, talking loudly, using phones in class, fidgeting) have a

negative influence on another students' cognitive load (i.e., the amount of information that working memory is capable of holding at a time).

The pandemic has created some situations where students are at risk of being removed from social supports. According to Morris et al., (2021), some students reported a sense of detachment from the college during the pandemic.

### 1.4.8 *Scenarios involving stress and burnout*

For some students, procrastination is exacerbated with stress, while for others it can be motivating. Deregulated stress can provoke procrastination and undermine learning and academic performance, particularly in relation to tasks that are unfamiliar and challenging (Haslam et al., 2004). However, not all stress is problematic. In fact, situations in which we are challenged are often what is most meaningful and exciting in life (Wilson et al., 2010). In many situations, stress means "I care" for the student. Conversely, under-stimulation is characteristic of boredom and disengagement (Sulea et al., 2015). As outlined in Yerkes and Dodson's paradigmatic Yerkes-Dodson Law (1908), in order for stress to facilitate, rather than jeopardise, performance or engagement, an "optimal range" of stress must be maintained. This raises the question of how some students can harness stress and use it to motivate themselves.

Demands placed on students during the pandemic have been unprecedented. Students living with family can have additional demands and may be working part time in addition to their course (Morris et al., 2020). Academic burnout is described as having feelings of cynicism and emotional exhaustion in relation to academic work (Ríos-Risquez et al., 2018). In these scenarios when the student's energy is depleted, they are more likely to perceive that they are unable to complete academic tasks, contributing to procrastination (Kroska et al., 2017).

Often when people are stressed their basic needs are not prioritised. For example, a student who is emotionally overwhelmed in other areas of their life, with competing family and

work demands, may be more likely to engage in academic procrastination (Muliani et al., 2020). Similarly, when students are studying, it is important to take regular restorative breaks to avoid burnout and stress (Liu et al., 2021; Peters & D'Penna, 2020). A highly cited study by Felsten (2009) highlighted the importance of taking restorative breaks in nature for students who are attentionally fatigued.

The role of psychological flexibility in elevating burnout has been well documented. In a recent study by Puolakanaho et al., (2020) a novel eight–week program based on ACT was shown to alleviate burnout. The intervention was a combined face–to–face group and web-based program with employees from a range of professional backgrounds. The intervention group outperformed the control group in all 14 scales used. The intervention had significant, broad, and long–lasting effects on burnout. Changes in psychological flexibility mediated the intervention's results (Puolakanaho et al., 2020). Studies have also highlighted the importance of equipping students with emotional intelligence enabling students to become more self-aware and manage stress (Carthy et al., 2012).

### 1.4.9 *Scenarios involving a disconnect from values*

Self-values and motivation are important to consider in relation to procrastination. After all, motivation is the force that drives people to take part in activities (Amabile, 1993) and procrastination is associated with an inability to reach personal goals (Gustavson et al., 2014). As such, it is not surprising that procrastination may be rooted in values. Values are chosen by the individual and are qualities of action that define an individual's lifepath (Hayes et al., 2012; Wilson et al., 2010) According to (2019) values are necessary to be able to discern one's purpose in life. Values motivate people to behave in particular ways to live a full life (Wilson et al., 2010). Once values are clear for the individual, concrete goals can then be identified and specific behaviours that the person can do to bring them closer to their values (Hayes et al., 2004). Values are more concerned with the process and direction in life rather than outcomes

(i.e., rather than pursuing the end goal, values are concerned with the process). A student's motivations for pursuing a particular university course can often be related to their values. Valued living can be defined as behaving in ways that are consistent with value statements (Hayes, 2012). Being able to identify what our values are and aligning our behaviours to these values is important for quality of life (Trindade et al., 2016). When students procrastinate, they are trying to feel good in the short term at the expense of long-term values (Sirois & Pychyl, 2013). Psychological flexibility helps students to engage with their values. For students, moving towards values, for example completing assignments, can sometimes be an uncomfortable experience. Committed action is needed to follow the valued direction in the context of psychological or even physical discomfort (Hayes et al., 2012).

The process of clarifying values has been shown to be effective in reducing procrastination. In a study by Scent and Boes (2014) researchers concluded that helping students to connect with their values and to find meaning in their work was a helpful component in overcoming procrastination. Chase et al., (2013) assessed the effect of goal setting and values clarity interventions on students' GPA. Results indicated that the goal setting interventions were enhanced by adding a component where students reflected and clarified their values. Similarly, in their ACT based value training, Morrison et al., (2014) found the combination of goal setting and values training improved academic performance (as measured by GPA) over the next semester compared to goal setting alone and a wait list group. Although this study did not directly look at procrastination it still focused on increasing motivation which ultimately helped their academic achievement.

Another process within the ACT model that is related to values is committed action (Hayes et al., 2006). Committed action refers to persisting with actions that are consistent with chosen values and goals, even when faced with obstacles such as uncomfortable thoughts and feelings (Gagnon et al., 2016; Hayes et al., 2012)

Committed action in relation to procrastination could mean working toward goals (i.e., passing exams) connected to ones' important values (pursuing education), even when this might produce discomfort in the moment such as (feelings of incompetence when challenged by course material. Gagnon and colleagues (2016) were the first to focus on the process of committed action in relation to procrastination, which can essentially be conceptualised as the opposite to procrastination. In their study, Gagnon et al. (2016) investigated whether committed action was predictive of self-reported procrastination. Results indicated that when keeping all other variables constant in the equation, committed action was the strongest predictor (negatively) of self -reported procrastination. This study highlights the importance of bringing in the behavioural aspects of the ACT axis. In other words, procrastination is more than a lack of mindfulness and acceptance (Gagnon et al., 2016)

Self-motivation is affected by people's needs. For healthy development to unfold, humans require supports for basic psychological needs (Ryan & Deci, 2019). As discussed above, one of the leading theories of motivation is Self-determination Theory SDT (Deci & Ryan, 1985, 2012). SDT is a macro-theory that considers human motivation, feelings, and improvement (Ryan & Deci, 2019) A meta-analysis by Tayler et al., (2014) highlighted the significant role of intrinsic motivation in high school and college students in Canada and Sweden. Results indicated that intrinsic motivation was consistently associated with higher performance controlling for baseline achievement (Taylor et al., 2014). Similarly, Froiland and Worrell (2016) found that intrinsic motivation predicted student engagement which, in turn, predicted higher Grade Point Average (GPA) in an African American and Latino population. According to Deci and Ryan (1985), extrinsic motivation refers to work that is stimulated by reward or mandatory situation (such as exams or assignments). In other situations, students' values may not be aligned with reasons for pursuing their chosen course. They may have chosen to do the course for alternative reasons, not connected to their values.

Whelan & Barnes-Holmes, (2010) argues for an alternative account of motivation. They criticised the concept of motivating operation and claimed that the terms intrinsic and extrinsic motivation (cognitive terms) do not overlap with behaviour analytic verbal practices. Instead, research that focuses on *manipulating* motivating factors has been effective for reducing problem behaviours (Whelan & Barnes-Holmes, 2010). According to Contextual Behavioural Science, theories should not be driven by mental constructs.

Motivations for completing academic work can also be related to literature on social pliance from the CBS perspective (Harte & Barnes-Holmes, 2022). Students may be motivated in engage in a behaviour for the social consequences, for example being accepted by a friend group. There are natural outcomes as a result of working hard on an assignment (such as achieving a high grade) but there are also social consequences (such as receiving praise from lecturers). Similarly, a recent study by Koppenborg & Klingsieck, (2022) examined how social factors influence procrastination. They found that participants exhibited lower state procrastination in group work with interdependence compared to individual work.

### *1.4.10 Scenarios where the student has difficulty with independent learning*

Many students enrol in higher education directly from secondary school and must adapt to a more independent style of learning than they were previously accustomed to. Learner independence is a key part of Higher education (Gow & Kember, 1990). In a qualitative study by Denovan and Macaskill, (2013) on first year's adjustment first year of university, participants highlighted this shift in freedom and responsibility. Participants described how the need to be more independent compared to secondary education proved challenging. This included changes in learning routine, course requirements, and increased responsibility (Denovan & Macaskill, 2013). Greenbank (2007) also found that the greater emphasis on independent learning, associated with the transition from secondary education to university, was a source of stress for students.

### *1.4.11 Academic procrastination in the context of the Covid-19 pandemic*

The global Covid-19 pandemic has provided a new lens to view and understand procrastination. Many factors in a student's life can affect their ability to be motivated and engaged with their study. As discussed above, context is central to understanding a behaviour and many contextual factors changed significantly for students during the pandemic. A range of contextual factors related to the impacts of restrictions may have affected students' engagement in learning during the pandemic.

A report conducted by Chirikov et al., (2020) in the midst of the pandemic from May to July 2020, surveyed 30,725 undergraduates at nine public research universities. Based on screening tools, they found that 35% of undergraduates and 32% of graduate and professional students screened positive for major depressive disorder, while 39% of undergraduate students screened positive for generalized anxiety disorder (Chirikov et al., 2020) Another study by Czeisler et al., (2020) compared 2019 survey results and June 2020 results, and reported increased symptoms of depression, anxiety and traumatic stress. They also found an increase in suicidal ideation in the age group 18–24-year-olds during the Covid-19 pandemic. It is not surprising that the pandemic evoked feelings of anxiety and depression for students during the pandemic (Copeland et al., 2021), feelings which are commonly associated with procrastination (Rozental & Carlbring, 2014).

Remote learning has generated new types of procrastination with multiple factors affecting a student's likelihood to procrastinate. A recent study by Morris et al (2021) offered an insight into student's experiences during the Covid-19 pandemic. Morris et al contextualised the issues that occurred for students at this time by interviewing college students about their experiences of remote working. In the study, students reported recognising the need for more structure in their days, with many students deliberately putting in place routine, for example time blocking specific activities. Many studies highlighted the importance of separating a

workspace from the area from a leisure area to create boundaries (Allen et al., 2021; Wang et al., 2021)

In Morris et al.'s (2021) study, participants also reported the benefits of watching recordings of live lectures at times that better fit their new schedules, rather than watching them in real time. By doing so, this allowed them to better organise their time. However, other students in the study reported that having pre-recorded lectures available throughout semester made them more likely to procrastinate as they could access them at any stage. This reduced the sense of urgency around watching lectures and contributed to procrastination (Morris et al., 2021). Other qualitative studies reported students' experiences of fatigue from staring at screens, also known in the literature as "zoom fatigue" (Amponsah et al., 2022, p. 3). Lastly, Almendingen et al., (2021) found that students reported pre-recorded lectures to sometimes be disengaging. These are unique scenarios that students have encountered since the move to remote learning, that often feed into procrastination.

As described above, while there have been some studies conducted on student engagement more generally during the pandemic, a gap exists on research in the area of procrastination more specifically. Furthermore, there has been limited studies conducted in an Irish context on the area of student engagement during the pandemic and an absence of studies on procrastination. With the new era of the hybrid model of learning (i.e., both in person and remote learning) it is more important than ever to gain an understanding of the types of situations that students commonly procrastinate, in order to be able to reduce it. The current research sought to explore these issues, and better understand how procrastination occurs in this challenging context.

### 1.5 Academic Procrastination within Higher Education: The Irish Context

There is limited research into academic procrastination in the Irish context. However, there are a number of studies on the student experience and student engagement more generally

which can be viewed as a proxy for reductions in academic procrastination. The contributions of these will be discussed below.

An important qualitative report conducted in Ireland by Moore-Cherry et al., (2015) highlighted reasons why students in third level education in Ireland drop out of their courses. It is well established in international literature that students who drop out engage in dysfunctional study behaviours such as procrastination (Scheunemann et al., 2021). Moore-Cherry et al.'s (2015) study reported that the main reason for student drop out in Ireland was students choosing the wrong course, a finding that is in line with international literature (Andrew et al., 2008). The study listed a number of reasons why this may be the case. One explanation is that students do not research the course properly. If the student was interested in the initial title of the course, they would likely research what the course entails (Müller & Louw, 2004). It is possible that the student may have been motivated to pursue the course due to influence from friends (Zimmermann, 2020) or pressure from their family (Griffin, 2012). This situation is in line Self-determination theory which state that motivation is strongest when it is intrinsic (from the individual's own desires) rather than extrinsic motivation i.e. imposed by external rewards (Deci & Ryan, 2012; Ryan & Deci, 2019, 2020). In other words, it is understandable that an individual would not be motivated to research a course (and ultimately discover that the course was not as expected) if their motivation for pursuing the course was not driven by inherent interest. This finding is also in line with the Acceptance Commitment Therapy perspective on values, that states that living in line with one's values is beneficial to wellbeing (Hayes et al., 2006; more on values below). According to this perspective, a student is more likely to be motivated if their reasons for pursuing a course are in line with their personal values. Students general disinterest in their course as an explanation for drop out also relates to the concept of "goal commitment" (Weng et al., 2010), which emphasises students'

need to have a clear vision and goals for which to strive towards, instead of passively attending higher education.

The tendency to choose courses that are not the correct fit may also reflect a lack of guidance from the student's support network or those in their school (Martinez & Munday, 1998). Some students may not have had exposure to others in their community pursuing third level education and therefore would have a lack of guidance in the process. In the report by Moore-Cherry et al., (2015, p.34), another reason students gave for dropping out was "*disliking the course*".

Another important issue identified by Moore-Cherry et al., (2015) in their study was the challenges students face when they drop out of courses and later wish to start a new course. Students are not able to carry over any course credits from the course that they have completed. In other words, their hard work cannot contribute towards completion of a new course. In addition, they are not eligible for the Student Grant scheme and are required to pay full fees. These factors, along with possible feelings of shame associated with dropping out, can leave the student quite vulnerable. Moore-Cherry et al., (2015) offers the suggestion of allowing these students to carry over some of their course credits. This report study by Moore-Cherry et al., by design, provides a surface level analysis of the reasons for student drop out. Therefore, a gap exists in the literature for a study to explore more in depth these kinds of issues around student engagement, procrastination and drop out.

Another important issue in the Irish literature that has been identified is the issue of the Leaving Cert Programme failing to adequately prepare students for third level education. A study by Smyth et al., (2011) used data and focus group interviews to investigate the Leaving Cert Programme from the perspective of students. Results revealed that less than 40% of students thought that the leaving cert prepared them for adult life, helped them to decide what they wanted to do after school, or helped them think for themselves (Smyth et al., 2011). This

is a concern as students may not be equipped well for the transition to third level education and as a result cannot deal with the difficulty level, contributing to procrastination. When the leap from the leaving cert standard of education to third level education is too large, students can feel ill prepared the demands of higher education (Smyth et al., 2011). This could be intensified for students who may be the first in their family to go to university and have no prior experience writing essays and corresponding with lecturers etc. As described above, a key feature of procrastination is the tendency to avoid uncomfortable feelings, (i.e., experiential avoidance; Hayes-Skelton, & Eustis, 2020). This can worsen when the task is challenging and unfamiliar and students feel that they are incompetent. O'Leary and Scully, (2018) outlined some of the criticisms about the leaving cert. Although it is important that students are challenged in their learning, once material exceeds the student's capability, they can become disheartened and want to disengage. This is reflected in Vygotsky's, (1966) zone of proximal development which states that when students are stretched past their Zone of Proximal Development (i.e., what a learner can do alone) it is important that they are helped to learn and understand new concepts. The main criticism is that the leaving cert does not involve enough "higher order thinking" something that is emphasised in third level education. Higher order thinking involves skills in understanding, applying, analysing, evaluating and creating information, instead of simply memorising and recalling facts (O'Leary & Scully, 2018). Therefore, the skills required in the leaving certificate programme have been criticised as placing too much emphasis on memorising rather than meaning making.

### *1.5.1 Changing nature of the Irish student population*

The Irish university population is becoming increasingly diverse (DES, 2011). In previous years, students at third level were mostly traditional students (i.e., students who came from learning cert) (DES, 2011). At present, there are students who may be parents, mature students and those who are re-entering third level education. There is a need to adapt to the

learning needs of the increasing diverse student population in higher education in Ireland as different types of students require different teaching methods and levels of support (AHEAD, 2021). The literature on student engagement and procrastination reveals that some of these groups may be more at risk of procrastinating and disengaging (Sabnis et al., 2022), therefore the curriculum needs to be designed in a way to cater to these types of students. To support the increasing diversity of the student cohort, the 'National Strategy for Higher Education to 2030' report (also known as the Hunt Report) emphasised the need for new structures in the higher education institutes in Ireland (DES, 2011). Recently, the Higher Education Authority of Ireland (2022) published policy aimed to address this issue. They described their aims to develop inclusive cultures to grow equality, diversity and inclusion. They announced plans to increase grants, prioritise learning options and have more availability of blended and online courses (HEA, 2022).

### *1.5.2* The need for appropriate levels of support

In order for students in higher level education need to be supported appropriately, there needs to be awareness of supports available in the university. In their study of supports for computer programming students, Noone et al., (2022) provided a review of "support centres", specific locations that students can go to for help with assignments with dedicated tutors. These centres are normally facilitated by postgraduate students, in a peer to peer model which has been shown to be successful in many institutes (Gamlath, 2022). Among their recommendations, Noone et al., (2022) highlighted the need for affective advertising of the service in order to target students in need of support. Often it is the case that the students who are most at risk of dropping out do not realise support is available (Noone et al., 2022). First year students in particular are often bombarded with new information when they first start University and may not be fully aware of the supports that exist. Although this study focused

on support for computer science students, its findings are also relevant for other student supports for example as writing centres or maths centres.

Results from a pre-pandemic Irish report on student engagement in higher education by McCashin and Boyd, (2021) also highlighted aspects of education that were important in order for students to stay engaged. Student responses indicated a preference for different learning and assessment formats. Students also emphasised the importance of feedback from teaching staff. The importance of appropriate feedback for effective learning is also well supported in the literature (Hounsell et al., 2008).

### *1.5.3 Reducing Procrastination: A Universal Design Learning approach to Academic Engagement*

Understanding the scenarios that students are likely to procrastinate can inform policy aimed at increasing student engagement. By highlighting the types of scenarios that cause students to struggle, changes can be made to their learning environment to increase student engagement. Universal Design Learning is a set of principles for designing curriculum aimed at accommodating student needs. The guiding principles of UDL are based on designing a learning environment to maximise inclusion (Zeff, 2007). UDL aims to be empowering rather than stigmatising. As discussed above, shame and stigma can lead a damaging vicious cycle of disengagement (Martinčeková & Enright, 2020). The pillars of UDL include multiple means of engagement and multiple means of representation and multiple means of action/ expression. Universal Design Learning aims to reduce barriers to learning and education. It is concerned with designing curriculum to motivate student engagement. UDL has been advocated for by a number of groups relevant to learning and education in Ireland including AHEAD (Association for Higher Education Access & Disability) and the National Forum for the enhancement of teaching and learning in higher education (AHEAD, 2021; National Forum, 2019). UDL is in line with the aspirations of the new TU Dublin education model relating to flexibility, diversity,

inclusion and engagement in programme development, teaching, learning, and assessment (TU Dublin, 2020a; TU Dublin, 2021). TU Dublin's transform EDU project is sponsored by the Higher Education Authority and a component of it is calling for teaching resources informed by UDL (Transform EDU, 2021).

## 1.6 The Measurement of Procrastination

As described, the majority of procrastination research is based on self-report measures which are not sufficient to understand. There is a need for understanding student experiences of procrastination which can inform subsequent quantitative studies.

In relation to existing measures of psychological flexibility, such as the AAQII The Acceptance and Action Questionnaire AAQ-2 (Bond et al., 2011), it is not broad enough to measure the processes involved in procrastination. Generally, the context specific measure of psych flexibility performs better than the generic measures of psychological flexibility (Ong et al., 2019). There is a need for domain specific measure of psychological flexibility for procrastination as there is a concern that the AAQII is not broad enough to capture the processes involved in procrastination. A psychological measure that specifically targets procrastination is needed. This study aims to address this gap by identifying the scenarios that students commonly procrastinate in order to inform the design of measures of academic procrastination and psychological flexibility within the domain of academic procrastination.

## 1.7 Conclusion

The research on procrastination to date has primarily relied on quantitative measures to understand procrastination. It has also highlighted a number of common scenarios that students commonly procrastinate or are motivated.

Researchers from various psychological perspectives have sought to understand the underlying causes of procrastination. The Contextual Behavioural Science perspective has

offered a new lens to view and understand procrastination that places emphasis on action in context. This study will include an interview schedule based on research from various psychological perspectives, (i.e., personality, motivational, cognitive, emotional regulation theory) combined with the contextual behavioural science approach, to understand the scenarios that procrastination occurs. This study will address a gap in the literature, by providing a comprehensive picture of the scenarios that students are likely to engage in procrastination and the scenarios where students are likely to be motivated.

The aim of the current research is to characterise the types of scenarios that make students more likely to procrastinate their academic tasks and the scenarios that increase student engagement. While there are an extensive number of quantitative studies on academic procrastination, the current research project will break new ground by using a qualitative method informed by Acceptance Commitment Therapy. The ultimate goal of qualitative research is to "enhance the understanding of a phenomena" (Byrne, 2021; Klingsieck, 2013). This research aims to tell a useful story of the situations that procrastination occurs. By seeking out the most evocative situations for provoking procrastination, this study aims to tell a compelling story. This reflects the concept of 'successful working' that is in line with the philosophy of contextual behavioural science. In this research, particular emphasis will be placed on the function of students' procrastination behaviour. As discussed, many of the existing studies in the area of academic procrastination are descriptive in nature. The approach for this study is pragmatic in nature (i.e., it aims identify issues for practical purposes). The project aims to inform educational practices and university policy on the deployment of resources for improving student engagement and reducing procrastination.

# Chapter Two

## Study 1

### 2.1 Chapter Overview

This chapter presents the first study in the thesis. This qualitative study used thematic analysis to identify the kinds of scenarios that make students likely to engage in procrastination, as well as the scenarios that are motivating. By identifying these scenarios, this study sought to inform educational practices and university policy on the deployment of resources for improving student engagement and reducing procrastination. The objectives of the research were:

i. To explore the common scenarios that make undergraduate students in a technological university in Ireland likely to either;
    A. engage in academic procrastination or
    B. feel motivated to engage in their academic work
ii. To explore students' experiences procrastination and student engagement, in the context of online learning.

#### *2.1.1 Qualitative Vs Quantitative approaches*

The majority of research on procrastination has used quantitative research methods involving mostly self-report measures (Abramowski, 2018). There is a large amount of evidence that indicates weak correlations between self-report and behavioural measures of the same construct (Dang et al., 2020). As a result, some important aspects of procrastination have been overlooked. Therefore, literature may have neglected aspects of procrastination that might be important for interventions. In the majority of literature on procrastination, less emphasis is placed on the context that procrastination occurs, instead it is focused on individual factors (Hailikari

et al., 2021). Quantitative research focuses on precise and exact measurement of behaviour and the extent to which it occurs in a given sample (Morgan, 2018).

Qualitative research aims to identify the kinds of issues that are important for the particular population being studied (Carminati, 2018). Therefore, the qualitative approach has the potential to improve understanding of the contexts that procrastination occurs, and the experiential issues that quantitative research often overlooks (Roller, 2019). Qualitive research contextualises important issues of the lived experience (Smith et al., 2009). While qualitative research is broad and inclusive of different perspectives and experiences, quantitative research is narrow and concerned with precision (Braun & Clarke, 2013). To precisely measure and understand procrastination, quantitative studies can often be too narrowly focused, missing important contextual clues (Braun & Clarke, 2013).

In summary, the existing quantitative research on procrastination is incomplete without formal contextual analyses. As such, the knowledge and insight that can be gained from current quantitative methodologies is limited. Qualitative research informs quantitative research of the issues that are important in the population. Therefore, focusing on student's actual voices will in principle reveal new functional insights about procrastination (Klingsieck, 2013). For these reasons, a qualitative approach was chosen as the most suitable methodology for this study.

## 2.2 Methodology

### *2.2.1 Population*

In the higher education sector in Ireland, the student population is becoming increasingly diverse. There are greater numbers of mature students, students from socio-economically disadvantaged areas and students with disabilities (HEA, 2022; AHEAD, 2020). There are also students of different nationalities and different ethnic backgrounds. The

literature reveals that these background factors can create barriers for students and interfere with their engagement. As described in the literature review, these students are forced to overcome additional barriers, which places them at risk of disengagement. It is well established that procrastination is often a behaviour that students engage in before they drop out. More research is needed into how procrastination can affect these types of students.

The population of Technological University Dublin (Blanchardstown) campus was chosen for this study as it has a diverse population that includes the types of students who may be at risk of engaging in procrastination. TU Dublin (Blanchardstown) is a campus that caters to students from the surrounding areas of from west and north Dublin, Meath and north Kildare (HEA, 2019). Statistics from a recent report on socio-economic status indicates that students from TU Dublin (Blanchardstown) come from socio disadvantaged areas (HEA, 2022). The deprivation index score is a new metric that draws on census data provides an understanding of socio-economic disadvantage or affluence of small geographical areas (HEA, 2022). This report shows that 17% of the student population in TU Dublin (Blanchardstown) come from disadvantaged areas, this is higher than the national average in higher education institutes across Ireland which is 10%. It also states that 23% of TU Dublin Blanchardstown students come from marginally below average areas. Findings from a 2022 report of non-progression rates in higher education institutions state that students from disadvantaged backgrounds are less likely to progress into the next academic year than affluent students (HEA, 2022)

TU Dublin (Blanchardstown) is a campus with lower progression and completion rates than the national average. In 2019 and 2020 12% of new entrants in level 8 courses in TU Dublin (Blanchardstown) did not progress on to the following year—compared to the national average which is 8% (HEA, 2022). Another study by the HEA published in 2019, reported that TU Dublin Blanchardstown (formally IT Blanchardstown) had a non-completion rate in level 8 courses of 41%, compared to the national average of 18%.

In TU Dublin (Blanchardstown) 20% of all learners are categorised as non-traditional learners (i.e., have not entered higher education on the basis of Leaving Certificate points (Meaney, 2022). Some students have entered directly from leaving certificate, some are re-entering college later in life, and some have done preparatory courses (level 6 or 7) before starting their level 8 course. Students who are non-traditional learners have higher than average non-progression rates (HEA. 2022). There's also evidence that mature students in particular have higher rates of non-progression than non-mature students (HEA, 2022). In TU Dublin (Blanchardstown) and across higher education institutes across the country there has been an increase in the number of students with disabilities enrolled in higher education (AHEAD, 2020). A recent survey by AHEAD found that in the last 11 years there has been an 226% increase in the number of students with disabilities registering for access to support services in higher education in Ireland (AHEAD, 2020). According to the study, between the years 2019 to 2020, students with disabilities engaging with support services in TU Dublin (Blanchardstown) made up 5.7% of the total student population, just under the national average of 6.2% (AHEAD, 2020)

Lastly, TU Dublin Blanchardstown is a campus that offers a range of courses including Applied Social Studies, Business, Computing, Digital Media, Engineering, Horticulture, Languages, Social and Community Development, Sports Management and Early Childhood Care & Education (TU, 2021,) National figures show that the lowest completion rates (i.e., students who failed to complete their courses) were in computing courses and those in engineering (HEA, 2022). National statistics also show that students who attend courses in the area of childcare tend to have a lower deprivation index score with 19% coming from disadvantaged areas (HEA, 2022).

### *2.2.2 Participants*

The sample size used in this study was 12 participants (see table 1 below). Sampling criteria was refined to include range in age, gender, undergraduate course etc, in order to have a sample reflective of the TU Dublin (Blanchardstown) population. The sample was represented evenly by gender. Seven students were female, and five students were male. The median age of participants was 22. Mature students were slightly overrepresented in the sample (25%) compared to the national average (12.3%) in colleges and Institutes of Technology across the country (HEA, 2021)

Students were asked if they were receiving support from any University service for a disability. Five students reported that they were linked in with the National Learning Network additional learning support such as students with learning disabilities, physical disabilities and students who were neurodiverse (i.e., ASD) This included cerebral palsy, dyslexia and hearing difficulties. The number of students with disabilities in this study (41%) were disproportionate to the number in the general student population at undergraduate level in Ireland (7.2%, AHEAD 2020).

**Table 1**

*Study 1 Participant Demographics*

| | |
|---|---|
| Gender | 5 Male/7 Female |
| Median age | 22 (range 20 – 47) |
| Mature students | 3 |
| Students linked in with learning supports | 5 |
| Receiving SUSI grant | 4 |
| Nationality | 10 Irish / 2 Irish Nigerian |
| Ethnicity | 10 White / 2 Black |

The sample size for this study (12 participants) was in line with recommendations for reflexive thematic analysis (Details of Reflexive TA are discussed below in section 2.3.1; Braun & Clarke, 2019). For Reflexive Thematic Analysis studies, Braun and Clarke (2013) recommend a sample small enough to retain a focus on the experiences of individuals, but large

enough to demonstrate tentative patterns across those individuals. Qualitative researchers generally suggest the inclusion of enough data to tell a rich story but not too much that it prevents rich complex engagement in the time available (Onwuegbuzie & Leech, 2005). In relation to IPA studies, various sample sizes have been used for IPA, typically from one to 15 (Smith et al., 2009).

### *2.2.3* Recruitment and sampling strategy

In order to be included in the study participants had to be over the age of 18 and enrolled in a full-time undergraduate degree on campus. Participants were given aliases to protect their identity.

The sample was selected purposively, in keeping with Interpretative Phenomenological Analysis guidelines (IPA discussed further in section 2.3.2) as opposed to probability methods. This means that participants need to be selected specifically to "grant access to a particular perspective on the phenomenon under study" (Smith et al., 2009, p. 49). IPA researchers aim for a homogenous sample; a closely defined group for which the research question has personal significance. Therefore, the sample was specifically chosen to be reflective of the students on TU Dublin (Blanchardstown) campus. For instance, it was noted that in initial expressions of interest, a lot of mature students expressed interest in taking part. The researcher was conscious of recruiting a participant pool that was representative of the student population in relation to age, gender, and ethnic background.

#### *2.2.3.1 Participant pool*

In December 2020 a participant pool was gathered. Expressions of interest were gathered for participation in advance. The researcher went into online lectures and spoke about their research study. It was explained that expressions of interest were being gathered for participation in a psychology research study on academic procrastination. A link to a Google form was posted in the chat box of the online lecture. Students were directed to click a link to

find out more about what was involved in taking part in the study and from there they could decide if that was something they were interested in. A number of students followed the link and completed the form which asked for their name, phone number and a good time to be contacted. Between May and June 2021, students from the participant pool were contacted through text and given more information about taking part. Students who responded to the text were followed up with to organise a suitable time to do the interview, at their earliest convenience. A conscious effort was made to meet participants on their terms, to be flexible and accommodating to participants and respectful of their time.

Initial participants were recruited form the participant pool however different recruitment strageties were also used. Some participants were recruited from a contact in the National Learning Network. The use of gatekeepers in research is well documented in research literature for gaining access to a population that was otherwise more challenging to gain access to. Some participants were recruited from snowball sampling (i.e., asking participants if they had any friends who might be willing to take part).

### *2.2.4 Ethical Considerations*

Ethical approval for this study was granted by technological university Dublin ethics committee. Consent was obtained from participants. All participants were over the age of 18 years. As the study asked about sensitive topics such as their experiences of procrastination and the pandemic, the counsellor was given notice that the study was taking place. Participants were also made explicitly aware that the researcher is not a psychotherapist and am not offering therapy. Every effort was made to protect the identity of the participants involved in the study. Following the interview, participants were given information sheets with a list of supports on and off campus, e.g., counselling service and Samaritans (See appendix 4).

All online data was securely stored in line with GDPR guidelines. Participant codes were developed that were meaningless to everyone but the researcher. No identifying

information was stored from the participants. All data collected was anonymised. Data will be stored for a period of 2 years from data collection time.

A procedure was developed for referring students who may be in need of emotional support to the counsellor on campus. The researcher prearranged an agreement with the counsellor. It was agreed that in the unlikely event a student became distressed during interviews they could be referred on to the counsellor. This was incorporated into the consent form.

### *2.2.5 Study Design*

The following paragraph will outline the design of the study including considerations of conducting online research; how the interview guide was developed; and insight gained from the pilot interview.

#### *2.2.5.1* **Considerations for conducting online research**

Students participated in the research from their home at a time that was convenient for them. Students were invited to choose a quiet space in their home where they could answer the questions at ease without the risk of being interrupted. Smith and Osborn (2009) recommend techniques as such noticing the effects the questions have on the respondents from their body language, noticing whether to back off and trying again more gently. Observational notes were taken after each interview, typically capturing observations such as whether the respondent had their camera on, any noise in background, where they were seated and their body language.

#### *2.2.5.2 Development of interview schedule*

An interview schedule consisting of several questions was developed, along with prompting questions (see Appendix 2). The interview guide was semi-structured and somewhat exploratory. The goal of the interview guide was to enable participants to recount as fully as possible their experience of procrastination. Open ended non-directive questions were used.

The interview guide was based on methodology from similar IPA studies (Denovan & Macaskill, 2013). Emphasis was placed on building rapport and putting the respondents at ease (Smith et al., 2009). Building rapport was an important element of the interview in order to make interviewees feel comfortable to speak honestly about their experiences. Example questions were: “Can you tell me about your experiences of procrastinating academic work?” Vignettes were also used, to evoke responses. Interviews began with descriptive questions, for example “can you tell me about what course you’re studying?”, this enables the interviewee to become more comfortable. An effort was made not to follow the interview guide too rigidly, so that the interviewee could have the opportunity to reflect deeper on some of their responses. The vignette was based designed to encourage students to reflect on common scenarios that were likely to be either motivating or cause students to procrastinate. Content specific vignettes such as these are used to open the discussion around a topic and establish rapport (Veal, 2002). Vignettes were worded clearly and designed to be realistic in order for participants to relate, while being nondirective (Barter & Renold, 1999).

#### *2.2.5.3 Pilot Interview*

A pilot interview was conducted in order to trial the interview topic guide and procedure for interviewing. The interview guide was reviewed following a pilot interview. The interview guide was updated in relation to some of the clarity of questions and the sequencing. It was established that it would put students most at ease if the interview began with descriptive closed questions, before progressing on to questions that required more reflection.

#### *2.2.5.4 Data Collection*

The following paragraph will outline the step-by-step procedure followed when collecting data through interviews with students. 12 interviews were conducted online

interviews with undergraduate students on Blanchardstown campus via zoom (approximately 1- 1.5 hrs long).

Prior to the interview, participants were sent a zoom link and were given an information sheet about the study. On the day of the interview, they were asked if they had any questions about the study. The participant signed a consent form before starting the interview (See appendix 1). Participants were informed that they could exit the study at any stage and did not need to provide a reason for leaving (see below for further details on ethical procedures followed). Participants were made aware that the interviews would be recorded. Some students who appeared apprehensive about being recorded were given the option of turning off their camera. The tape recording began when the interviewees felt ready. Both verbal and written consent was sought as participants were asked again during recording of the interviews. Interviews were conducted through zoom and recorded through zoom. Video recordings were later transcribed verbatim. Participants were given pseudonyms to anonymise data.

A strategy of building rapport was used with participants in order to build trust and put participants at ease (Nosek et al., 2002). In keeping with IPA approach, interviews were semi structured and somewhat exploratory. The interviews started off with closed questions descriptive questions and then lead to more open questions. Consent, verbal and written, asking if they have any questions at the end. If the respondent opened up about a novel or interesting area of enquiry then this was pursued (Smith, 1999). The aim was to facilitate respondents in an empathetic and understanding manner. The researcher tried not to stick to the interview schedule too rigidly. A rigid approach can restrict the participant in speaking about aspects that are important to them (Hopf, 1974 in Flick, 1998). The interviewee asked follow-up questions to encourage the participants to expand on their answers.

At the end of the interview, participants were debriefed. Participants were invited to add any further comments to ensure that their experiences had been covered. Participants were given a debriefing information sheet with information on supports.

#### *2.2.5.5 Follow up interviews*

A longitudinal aspect of the study was incorporated in to study 1. Participants who took part in the interviews were invited back to reinterview one year later.

The aim was to gain an insight into students' progress after the lockdown. At this time students were no longer living under restrictions in place to prevent the spread of Covid-19 virus. The study sought to explore how students' experiences may have changed from being under in the more severe restrictions of lockdown to a period where restrictions were eased. Four out of twelve students were reinterviewed in June 2022 (one year later). There were some challenges related to uptake for follow up interviews. Two students did not respond to the request be reinterviewed. One student (Grace) reported that she had dropped out her course and was unavailable for interview. Five out of twelve students had graduated and were no longer enrolled as students. It was decided that reinterviewing graduated students was beyond the scope of the study as they would not be able to give further experiences of academic procrastination as an undergraduate student.

### 2.3 Analytic Procedure

The qualitative approach used in this study was Reflexive Thematic Analysis (Braun & Clarke, 2019). This meta-theoretical approach allows other approaches to be incorporated into it. Two complementary approaches were incorporated under the umbrella of reflexive thematic analysis namely Interpretative Phenomenological Analysis (IPA; Smith et al., 2009) Discursive Analysis (DA; Wodak & Krzyzanowski, 2008). As this research is focused on

students' experiences but also concerned with identifying patterns of meaning, both IPA and reflexive thematic analysis were suitable approaches. While discursive analysis was deemed complimentary to these approaches as it contributes socially patterned meanings. The following paragraph will outline these three approaches and why they were deemed suitable for this research.

### *2.3.1 Reflexive Thematic Analysis*

Reflexive Thematic Analysis is an approach in qualitative data analysis that is theoretically flexible (Braun & Clarke, 2019). It aims to facilitate the identification and analysis of patterns or themes in a data set. This means that other approaches can be incorporated into it. In Braun and Clarke's (2019) reflexive thematic analysis approach, the researcher has an active role in producing knowledge. The researcher interprets patterns of meaning across the data set, which are represented by codes. Relatedly, this research is interested in identifying common patterns among the data, in relation to student procrastination and engagement, making Reflexive TA a suitable approach.

The six stages of Reflexive Thematic Analysis (Braun & Clarke, 2019, 2021) were followed while also incorporating elements of the four-stage procedure of IPA. However, Braun and Clarke (2021) explain that the phase approach is not intended to be followed rigidly but can sometimes be blended together. They describe the process as recursive. Stage (1.) involved transcribing and reading the interviews a number of times to ensure that a general sense of the participants' accounts was acquired. The aim was to become as familiar as possible with the transcript and writing familiarisation notes (these notes were combined with the notes made directly after each interview that included the researcher's general impressions). Stage (2.) involved coding the data systematically. During this stage, it was decided that some codes were too broad, for example "social connectedness" and was instead divided into more specific

codes such as “speaking to classmates”. Stage (3) included generating initial themes from coded data. Stage (4.) Developing and reviewing themes.

### *2.3.2 Interpretative Phenomenological Analysis*

Interpretative Phenomenological Analysis (IPA) is an approach based on exploring how participants make sense of their personal and social world (Smith, et al., 2009; Smith & Shinebourne, 2012). It is interpretative and acknowledges the role of the researcher in making sense of respondent’s experiences. Its philosophical underpinnings are within phenomenology, symbolic interactionism, hermeneutics and idiography (Smith, et al., 2009). Phenomenology is a philosophy developed by Husserl (1982) that is interested in understanding human experience. How people make sense of their personal and social world. In this study, it is the role of the researcher to probe participants’ responses to help them to recount and articulate their experiences. Phenomenological psychology rejects the notion that one can construct an absolute objective ‘truth’ about one’s experiences. The majority of IPA studies use semi structured interview methods. Smith et al. (2009) explain that there is a double hermeneutic in IPA. In IPA the researcher helps the participants to access their personal world by asking open ended questions in order to prompt reflection (Smith et al., 2009). IPA involves a double hermeneutic, whereby the participant is trying to make sense of their personal and social world, while the researcher is trying to make sense of the participants trying to make sense of their personal and social experiences.

### *2.3.3 Discursive Analysis*

Discursive Analysis DA (Wodak & Krzyzanowski, 2008) contributes to this study by exploring socially patterned meanings in the students’ responses. DA is based on the belief that language is socially constructed, in line with the social constructionist approach (Potter & Wetterell, 1987). It is from the constructivist and Relativist position (Burr, 2003). Combining

DA into reflexive TA and IPA approach encourages the researcher to shift perspective throughout the research journey. Verbal data is regarded as behaviour in itself. Similar to the Contextual Behavioural Science perspective, DA considers context and how it affects the meaning of the sentences (Wodak & Krzyzanowski, 2008). It emphasises the socially patterned meanings which are useful for exploring participants engagement academically and the function of their procrastination behaviour. DA is useful in situations where students may switch topic in interviews or use euphemisms. It is concerned with how language may be used to have a different meaning, and presence of juxtapositions. It can be used to reveal how language may be used to have a different meaning, as well as presence of juxtapositions. DA considers context and how it affects the meaning of the sentences (Wodak & Krzyzanowski, 2008). Discursive analysis is concerned with the social pauses, intonations in people's speech and speech gestures (Wiggins & Potter, 2010). According to discursive analysis there is no "real" version of the event. It is concerned with issues such as emotions, identity, accountability. It was deemed relevant in exploring situations where students may shift blame away from themselves or around their different forms of their identity (e.g., student, family member, member of their community, family member).

While following the guidelines of the above three approaches (Reflexive thematic analysis, IPA and Discursive analysis) another key aspect of the interviewing process was to keep in mind the functional analysis approach during the interview. This involved asking questions to understand the function of a given behaviour. For example, the factors in a person's learning history that can feed into procrastination and disengagement. Throughout analysis attention was paid to the use of language, as in line with discursive analysis.

### *2.3.4 Reflexivity*

Both reflexive thematic analysis and IPA recognise that the researcher's perspective affects analysis (Braun & Clarke, 2019; Smith et al., 2009). Reflexivity is attentiveness to the

influence of the researcher on the research process (Clancy, 2013) The researcher's interpretive framework has been influenced by; review of literature on stress and coping strategies, personal experience of undergraduate life and coping with academic challenges. This experience would be of benefit to build rapport with interviewees and facilitate analysis. The researchers' preconceptions were documented, a reflexive journal was kept throughout the research process.

## 2.4 Findings

This section explores the data collected through interviews with undergraduate students directly after finishing their end of semester summer exams and/or continuous assessments in May 2021. Interviewing students at this time allowed them an opportunity to reflect upon their academic engagement throughout the preceding academic year while they still had relatively vivid recollections of those experiences.

**Table 2**

*Study 1 Findings*

| **Theme 1: "I hate myself for always doing it"** | |
|---|---|
| **Theme 2: Unhelpful Self Stories** | • "I feel so stupid": Feelings of inferiority compared to classmates. |
| | • "If I don't understand it, I'll prolong it": Scenarios where the topic is challenging or unfamiliar. |
| | • Doing other tasks as a way to feel "productive" and self soothe. |
| | • Students' misconceptions around completing coursework. |
| **Theme 3: Self stories imposed by others** | • Student Identity. |
| | • "The black sheep": A sense of connection and belonging. |

| | | |
|---|---|---|
| **Theme 4: Structuring of time** | • "Total waste": Wasting valuable rest time. | |
| | • Disrupted routine. | |
| **Theme 5: Inattention and Distraction** | | |
| **Theme 6: The scenarios that help** | • Social accountability | Encouragement/ Accountability from family members. |
| | | Accountability from peers. |
| | | Accountability from learning supports. |
| | • Feeling worthy | Feeling reassured by the lecturer. |
| | | Intrinsic interest in course material. |

### *2.4.1 Theme 1:"I hate myself for always doing it".*

This section highlights the strong feelings that arise for students as a consequence of procrastination. It was very clear from the interviews that undergraduate students routinely struggle with uncomfortable and conflicting feelings about when, and even whether to engage with their academic work to completion. These feelings most commonly included not just acute stress but also distress in the form of anxiety, self-hatred, hopelessness, guilt, anger and a general sense of dread. The following paragraphs testify to the striking and profound concerns, and demoralizing mental health symptoms, that these students reported experiencing as a key part of their academic procrastination.

Firstly, Greg described how his thoughts can spiral into despair whenever he puts off an academic task until the last minute before its submission deadline. *"Just a general sense of dread. Just, I think that everything's going wrong……. And yeah, it's just a feeling that everything's going wrong, that nothing's going to work out"* He worries that if he continues to delay starting a task, it could potentially lead him to poverty through dropping out of college

and becoming homeless. *"…and that if I don't do something now... I don't know why, from when I was a kid, I've always had this thought in my head that if I don't do well in school or work, I'll just end up living on the streets."* He explains that this scenario of becoming homeless is not necessarily an unrealistic possibility, and describes the overwhelming sense of doom *"…It's just a thing I've had since I was a child, and it always just comes back into the back of my mind. I know its not necessarily... Not a ridiculous thought to have, but it's not a very likely scenario that would happen, but it's something that scares the absolute bejeezus out of me.".* Crucially, he recognized that this ruminative thinking actually contributes to him further procrastinating engaging with his academic commitments " *I think it puts me in a worse place now because then that kind of thought is circulating in your head. If I don't do well, I'm not going to get anywhere. I'm going to be stuck here for years and years, and blah, blah, blah."* It is important to recognize that for many students like Greg their sense of overwhelm about their financial and social prospects is not just a self-perpetuating set of thoughts. TU Dublin (Blanchardstown campus) is a university campus that specializes in catering for students from socioeconomically disadvantaged areas, and has one of the highest deprivation index scores in Ireland (HEA, 2022). This means that for many TU Dublin students they face a realistic threat of poverty and homelessness. For these students, the level of (dis)stress they struggle with as part of a cycle of procrastination can be particularly severe.

Bearing this out more broadly, Lauren aged 40, is a mature student who experiences intense feelings of stress as a result of procrastinating. Lauren returned to college to later in life to earn a degree after working in the relevant field for a number of years. She is also a parent and suffers from a physical condition that affects her handwriting. For the last semester of her college course, she had access to a scribe for note taking. Lauren admits that she often tends to leave academic work to the last minute*. "I do that all the time. ……. "If I have an assignment that is due at 11:59, I'll be submitting it at 11:58. That's how bad I would be "*. She describes

the physical and psychological manifestation of stress on her body in the time leading up to submission of assignments. *"And I find that I get so worked up, so stressed, anxiety, like, I can't sleep the night before. And I get how would you put it? It's like heartburn, like extreme headaches until I have it submitted".* Lauren acknowledges the affect that this stress has on her body and overall wellbeing while also admitting that procrastinating is a common and somewhat inevitable occurrence. It is likely that motivation for completing the task reduced when it is associated with such extreme emotions.

For Lauren, the physical and psychological feeling of distress caused by completing last minute assignments appears to have transferred over to new situations. Lauren appears to have inadvertently established a vicious cycle of attempting to manage her distressing feelings about procrastination by further procrastinating. She has learned to associate engaging with her college work with extremely negative emotions, therefore each time an assignment is due she wants to put off engaging with it until the last minute.

Lauren describes being *"exhausted"* and *"drained mentally"*. This makes the task of engaging with academic work and uphill battle. When she has used up all resources, she simply has nothing left to give. She uses language such as hitting "*rock bottom"* and hitting a "*brick wall"* to describe her loosing motivation to engage with her work.

Another undergraduate student, Grace aged 21, expressed how procrastinating gives rise to self-criticism and perhaps even self-stigmatization. Grace is a Nigerian-Irish first-year social care student. She is not eligible for the Susi grant as she previously dropped out of an undergraduate course. Her motivations for completing the course appear to be influenced by her father, who didn't have the opportunity himself to go to college and get a degree. *"I feel like he just wants me to get a degree. And then it's just like, okay, I'll get my degree."* This appears to place Grace under additional pressure.

Grace worked part time for some time during the academic year, stating that this was necessary as her father had lost his job during the pandemic and no longer had a regular income. This financial stress likely added to the pressure to perform well. All of these background factors illustrate the high level of pressure placed on Grace to perform well in her course. It is likely that this pressure exacerbated the negative feelings she experienced when she did delay starting her assignments.

When Grace was asked about the feelings that arise for her in situations that she procrastinates she describes feeling mostly *"guilt and anger*". Grace describes feelings of anger and self-hatred for her procrastination behaviour but feels that it is an inevitable outcome; "*It's because I feel like I know myself already that I know I'm going to leave it to the last minute… and I hate myself for always doing it because regardless or not, someone could encourage me, I could have my laptop, I'd end going up online shopping instead of opening the assignments.* There is a sense that the behaviour is out of her control and that it is something that happens to her. *And it's just literally anger towards myself because I know what I'm going to end up doing at the end of the day, regardless or not if I open my laptop or not."*. There is clear self-conflict within herself as she understands that her behaviour is not serving her, but she feels that it is an inevitable outcome. Although on one side there is a sense that her tendency to delay her work is out of her control, there is also a conflicting narrative that it is her own fault.

This sense of self frustration continues throughout the interview as she acknowledges that her procrastination behaviour is causing her a lot of stress "*I'm just like, "Why did I start the day before?" I could have started three days before and I wouldn't be going through as much stress as I'm going through now….."*She speaks about how on the surface it may appear that she likes a certain amount of stress (perhaps referring to the concept of 'working better under pressure'), however, she states that she in fact hates the feeling of being under pressure coming up to a deadline. *"And I hate stress, but the way I act, it's like you think I love the*

*stress, which I don't, but I hate it."* Throughout her interview she exhibited a lot of self-criticisms and a lack of self-compassion towards herself, a common feeling for students caught up in cycles of procrastination (McCown et al., 2012). During follow up interviews, (approximately 10 months later), when Grace was asked if she would be available for interview, it was revealed that she had dropped out of her course and was not available for interview.

Grace speaks about experiencing external "*pressure"* from family members. When she told her father she was struggling with coursework she faced some backlash *"I told him I thought I was going to fail a module, and he just went 360. He did a whole 360. He wasn't happy."* For Grace, some of her pressure came from not wanting to disappoint her father. It is likely that her previous experience of dropping out of a course contributed to some feelings of shame and inadequacy. Grace's interview illustrates that some students have more obstacles to overcome than others when it comes to engaging with college work.

For many students, putting off college work, in order to put energy elsewhere (part time jobs, caring for children, etc.) is a necessary coping strategy in order to function. When students are juggling many different roles, the role of student cannot always be prioritised. It is evident from the three examples above, the strong emotions that students experience as a result of procrastination. This leads students to associate doing their assignment with these strong feelings of stress. From the behavioural psychology perspective, the procrastination behaviour in this instance can be described as negatively reinforced (i.e., the moving away from the uncomfortable feelings associated with the task; (Gagnon et al., 2019a; Hayes et al., 2006)

### *2.4.2 Theme 2: Unhelpful self-stories*

This section describes the self-stories that prevent students from engaging in course work. Throughout the interviews students described the different kinds of stories that they tell themselves, in the moment, to justify delaying engaging with their academic work. This section

will describe the different kinds of self-stories students tend to tell themselves, in the moment, when they engage in procrastination.

***2.4.2.1*** "I feel so stupid": Feelings of inferiority compared to classmates.

Most of the interviewed students reported feelings of intimidation associated with private group conversations among their class year and tutorial groups on messaging applications such as WhatsApp or Facebook Messenger. Such class and tutorial 'group chats' have emerged over the past decade as a very common medium to share information and build rapport among classmates. The COVID-19 pandemic was a unique time for the use of group chats as opportunities for casual conversations in person, such as outside lectures were no longer possible. Topics discussed can sometimes include the content of essays and the results students receive on coursework, The content of their conversations can sometimes be misleading and can misinform students. These group chats are informal in nature. However, they were one of the only informal, private means of talking to classmates during the pandemic. People may be more or less sensitive to being intimidated, depending on experiences from their learning history and narratives imposed on them from society (more discussed below in theme 3). Various responses below refer to students' tendency to feel intimidated by discussions on the group chat.

Below, Tina, comments that she finds the Facebook class group chat to be stressful. *"We have the Facebook one as well, which can get a bit too stressful at times. And then I mute it because it's everyone asking about 100 questions".* Tina is a final year, creative digital media student who is describes herself as *"very organised"* and "*a perfectionist".* Students are exposed to the opinions of their classmates at all times of day, which can intensify some of these feelings of intimidation. By removing the stimulus, (i.e. muting the group chat) she is able to able to remove the trigger (receiving an influx of messages about an assignment) for her stressful feelings that occur. Muting also helps to establish healthy boundaries between

college work and downtime. It is helpful to have a separation of study time and leisure time (more discussed in theme 4 ‘structuring of time’).

Tina talks about how discussions on chat can make her worried about certain aspects related to coursework that she wasn’t previously worried about; *and you're like, "Okay, I'm not stressed on that, but now I'm getting stressed*.". In this situation Tina is experiencing some self-conflict as she knows she is capable of completing an assignment, but this thought this contradicted when she sees others asking questions in the group chat. Perhaps by seeing others asking questions, this leads her to believe that the assignment will be challenging for her to complete.

Tina, also made the point that the group chat was more active during the pandemic than previous years, meaning students could ask each other questions at any time of day, intensifying these feelings of intimidation. Pre pandemic, when students attended in-person lectures they had a window of opportunity, during the college day, to ask their classmates questions. During remote learning there is more of a reliance on the group chat for peer learning. As most students have their phone or a device near to them at all times, this meant they could be in conversation with classmates at any time. *“But also, everyone is near to it, near to a device, so they're quicker to ask a question”* This is positive in some ways as students can easily ask questions but also likely to have intensified feelings of intimidation. *“So, it's both overwhelming and also easier at the same time”*. The group chat is an aspect of the student experience that isn’t highlighted in university documents such as the student handbook or university policy. As Tina pointed out, these group chats are active, meaning most students either write messages or at least monitor the responses on the chat. Any aspect of the university experience that students are engaging with to this extent is worthy of further investigation.

Zara, is a 21 year old first-year social care student, was also in agreement that the group chat during the pandemic facilitated conversations that would not have otherwise been possible.

Zara entered her course after completing the one-year TU Dublin Access Foundation Programme AFP (a preparation programme aimed at individuals from communities who have not traditionally had access to third level education; TU, 2019). Zara describes the ACCESS programme as *"like a fall back if you don't get enough points in the Leaving Cert….'Cos I didn't, 'cos… I was stressed out to the max"*. Zara describes how it was easier to ask questions in the group chat than it would've been face to face on campus. It not as easy to walk up to classmates in person and ask questions whereas the group chat facilitates this type of exchange. However, students may have been more likely to ask a question in the group chat as it was easy to write a message and click send. *"Cos I feel like you wouldn't go up to someone every five minutes and be like, here, can you help me with that? Whereas you can just send them a text."* For Zara it is clear that she values the opportunity to seek reassurance from classmates in the group chat.

Below Rachel, a mature student, commented that although she doesn't feel overly intimidated by the WhatsApp group herself, she has noticed that her fellow classmates can be intimidated by it. "*It doesn't really bother me but I know it could be very intimidating for some people in the class, you know? I've heard some people in the class say it's very intimidating for them".* Students who do not usually receive high grades, may find the group chat intimidating. For these students who may have struggled with an assignment, seeing others achieve high grades can be intimidating *"Like, if they're not… say for instance if they're not getting really high grades or anything, then obviously the chat is going to be very intimidating when people are saying, such an assignment was really hard, you know what I mean?"*

This was the case for, Grace, below, who often finds the conversations in the group chat overwhelming. She commented that there are times when she feels she has understood the question and what is required from an assignment. However, she then reads messages from her classmates discussing what content they think their essays will include. *"I read the questions*

*and I understand the question, but then we have a whole group chat as well. Everyone starts putting in their input about what you should put in the essay"*

This then makes Grace nervous as her classmates mention different content that she was not intending to include in her own assignment: *"and then I'm just like, 'Oh, I wasn't going to mention that.'.* She believes that in order for her essay to be to the standard of others she must mention the exact content that others are mentioning.; *Then it's like this person's mentioning it and it's because they start talking about their grades and then it's just like, "Oh, my grades aren't as good as theirs ". Then it has to be a reason why theirs is as good."* Grace appears particularly sensitive to the discussions of the group chat as she acknowledges that her own grades aren't as high as some of her classmates.

Grace appears to be particularly intimidated when other students are capable of exceeding the wordcount of an essay, whereas she struggles to write enough to reach the minimum word count requirement; *"That's when the group chat becomes annoying, it's because they've gone over the wordcount. And then it's just like, no, I couldn't do that."*. This then leads her to feel incompetent; "*Sometimes I'm just like, 'Oh, I feel so stupid,' that's what's going through my brain is that I'm just like, how come these people could get it and I couldn't get it"* Throughout her interview, Grace appears displays a lack of self-compassion. She exhibits anger at the situation but she also anger at herself.

Grace highlights how she feels she should be more capable of writing essays than mature students as she was in education more recently than them. *"And then it's like the group chat you see, it's older people……..And I was like, these older people haven't been in education, whereas I've been in education recently,"* When she sees some of the mature students succeeding in comparison to her this makes her feel as if she is inadequate or *"stupid". "and then that's when I feel even more stupid. I just end up feeling so stupid, even though I know I'm not stupid."* For Grace responses in the group chat triggers feelings of inadequacy.

She appears to be low in self efficacy as she doesn't believe she is capable of completing the assignment to a high standard. Therefore, these thoughts of not being good enough are creating a barrier for her and preventing her from engaging with her work.

Although the topic of class group chats has not received much attention from academic staff, interview responses indicate that intimidation associated with group chats can be a potential stumbling block for some students. In other words, group chats may be a particular context that may be likely to trigger intimidation, leading to disengagement.

#### *2.4.2.2 "If I don't understand it, I'll prolong it": Scenarios where the topic is challenging or unfamiliar.*

Many students appear to procrastinate when they are confronted with a task that is unfamiliar or otherwise challenging. For instance, Lauren comments that when she encounters a subject that she dislikes or feels she doesn't understand, she is inclined to leave it to the last minute. As described above, Lauren tends to leave assignments until the last minute, however this is particularly the case if she is challenged by the assignment. *"I find that if there is a subject that I don't like or I totally don't understand, I will leave it right until the very last minute".*

Similarly, Jane is likely to put off aspects of the coursework that she finds challenging. Jane is a final year Early Childhood Education and Care student. She has cerebral palsy and receives learning support from the National Learning Network. She commented that if she doesn't understand an aspect of the coursework, she will try to find other activities to do instead of her assignment. *"If I don't understand it, I'll prolong it, I'll try and do everything under the sun not to do it."* Jane uses a *"three-time rule",* whereby if she doesn't understand the objective of an assignment she will make two attempts to understand; *"It takes me three times to really understand what I'm supposed to be doing."* Although initially Jane describes situations where she avoids her work, she also describes how she is willing to sit in the discomfort of not

understanding and make additional attempts to understand something. This mindset may likely stem from her having a disability and understanding that she may need to work harder than others in order to complete coursework. She states *"I feel like because I have all these difficulties as it is, there's no room for error"* However she states that she uses her disability as *"motivation"*

Jane describes how once she gains an understanding of what she is supposed to do for the assignment, procrastination is less likely to happen, and she can finish the task promptly. *"But once I grab the concept of what I'm supposed to do, then offline it could take me 2 hours to do something and get it done. And then the procrastinating just doesn't happen"* Once she has removed this barrier (i.e., the discomfort of not understanding challenging material), she can proceed with the task.

This discomfort associated with not understanding is also the case for students who are typically motivated and engaged. As shown in the quote below, Tina likes to perform to the best of her ability. She is student who is normally highly motivated: *"I want to be a perfectionist on everything and do as well as I can".* However even Tina struggles with procrastination when doing a task that is particularly challenging. "*Specifically, if I don't really like what I'm doing, like coding or something. Even though coding is something you need to start at the start and keep going, I really don't like it because I'm really bad at it."* Tina tends to get frustrated when she feels like she is unable to find a solution and her coding doesn't work. This frustration then leads her to avoid doing the task. *"….But I'm not really bad at it, it's just something that just... It just never works. I know how to do it, but it never works. So it annoys me. And I try to avoid it because it annoys me so much."*

In these examples above, many students, when challenged by course content appear to be persuaded by the self-story of "I can't understand this, why should I bother trying". This reflects reluctance to make mistakes or feel disorientated, which is a necessary part of learning.

Ultimately, there needs to be room to make mistakes as it is an inevitable stage in the process of learning. Again, this unwillingness to experience uncomfortable feelings reflects psychological avoidance (Hayes et al., 2006). ACT teaches students to become aware of the types of feelings that arise for students in these scenarios, to notice the thoughts but to move in valued directions (finishing the assignment) in spite of these thoughts.

Other students mentioned situations where they did not understand lecturers or aspects of the course content. This highlighted in the literature as a common feature of procrastination (Blunt & Pychyl, 2000). The language that lecturers use and how concepts are explained can sometimes impact students understanding. This feeling of intimidation, can discourage students from engaging with the task at hand.

Below, Luke describes how he struggles with some of the vocabulary that his lecturers use. Luke is a creative digital media student who is on the autism spectrum and had a diagnosis of dyslexia. He perceives some of the language used as being advanced and inaccessible at times. *"I don't understand complex vocabulary. When you go to, like, science or some of that, they have vocabulary for different things"*. He speaks about the process of having to google some of the vocabulary that lecturers use, in order to understand the course content. This makes the point that this is an added, making the process of completing assignments or engaging with material slower. *"I feel like whenever a teacher was talking, like, smart talk intelligence, there would be a word in there Right. And I'd have to Google search the meaning of that word to break it down. So I know what they're talking about. It made the process even slower"* Not understanding vocabulary can contribute to feelings of stigmatisation for students, which is a risk factor for disengagement. Luke spoke about times that he didn't know how to contribute during class discussions. Participation on group discussions is an important aspect of learning.

Similarly, for Dylan, when he feels the topic of an academic task is "waffly" or vague, he is less inclined to be motivated to do the task. He feels some topics aren't as tangible as

others. *"This is a bit waffly. It's a bit fluffy." I wouldn't be too pushed about it, but they'd be the ones where I'd really be like"*. Rather than explore these topics further for clarification, he routinely sets about finishing them as soon as possible so that he doesn't have to spend too much time thinking about them. *"Oh, I couldn't be arsed. I just want to scrape the grade. I don't want to get them graded. I just want to get it done, out of the way," and I'd really just waffle about them and waste my time"* Dylan does not want to face being graded for these assignments, he wants to avoid the situation where he receives a low grade because this could give him uncomfortable feelings.

Dylan has a tendency to dismiss aspects of the course content that he finds difficult to relate to. In other words, to the extent that Dylan perceives course content to not align with his (career) interests or values, he is less likely to engage with it in any meaningful way.

Related to the topic of not understanding course content is the need for students to be reassured while attempting to complete difficult tasks. Many students mentioned some of the barriers that exist in seeking reassurance from lecturers. This barrier to communication appeared to be heightened during remote learning.

Zara highlighted how it is easier to ask lecturers questions in person rather than online. Carefully composing an email to send to a lecture is an additional step for students, particularly when they are unfamiliar with this process. In person, a student can easily speak to the lecturer at the end of class and this is not an issue. *"you know, in a lecture you can just say it whereas, sometimes, in… when you write an email, you have to word it the right way……..It's easier to ask them and then you get an answer there and then."*. Zara referred to the additional barrier with choosing the correct wording when composing an email. It is likely the use of formal language is not something Zara is familiar with and may not feel comfortable using this type of language. This creates an additional distance between student and lecturer and disrupts ease of communication that is necessary for student engagement.

Zara described how when lectures used mostly pre-recorded lectures there were less opportunities to ask questions. *"But you didn't have that opportunity as much. In the first semester, everybody was live and you'd get the odd recorded one, but in second semester, I think they were fed up or something with remote learning and they just started to record them.".* This meant that by the time students got a response from lecturers about a query they had about an assignment, it was sometimes too late as they would've already submitted their assignment. Zara also noted that lecturers are not always able to respond to students queries in a timely fashion, particularly during covid when lecturers likely had to manage a greater number of emails. *"Because they have a backlog of emails, and you don't get a reply. If you're trying to email them something that you're confused about, you're probably going to have to, you'll probably be too late by the time you get an answer"* For many, this additional step of getting in touch with lecturers can be off-putting for students.

Similarly, Greg, as the student representative for his course, spoke about instances of students having concerns or queries and lecturers not responding in time. This means that students sometimes do not get their query answered in time. *"Sometimes the lectures just won't respond to emails……..Then when it comes to responding to students it's two or three weeks later, when the situation is either too late to be resolved or has kind of passed".*

For some students, a task can feel impossible or *"insurmountable"* without the appropriate learning supports, contributing to the urge to disengage. Brendan, below, reported that he is dyslexic, has attention deficit disorder (ADD) and is on the autism spectrum. He receives learning support from the University through the National Learning Network (NLN). Although Brendan doesn't currently engage in procrastination, it was a problem for him at times in primary school when he didn't always have access to learning supports in class. *"This is going to sound really bad to be admitting this, if I didn't have an SNA with me in a class and the work I was given for homework I thought was completely insurmountable, I would just not*

*write anything in it.* He described how he felt that evenings were stressful and he didn't want the added stress of attempting to do homework that he perceived to be impossible."…*because I would think to myself, evenings are already stressful. I don't need this burden on my shoulders further worse than it."* However, in Brendan's story above, without the appropriate level of supports, the difficulty level of the task exceeded his abilities, making him want to disengage. Later in the interview Brendan refers to the supports he receives at present (i.e., help with organisation) and states that procrastination is not as much of an issue for him as when he was younger. Therefore, it seems this scenario of not understanding the lecture the objective of the assignment or perceiving the task to be *"insurmountable"* is a common scenario for evoking procrastination.

#### *2.4.2.3 Doing other tasks as a way to feel "productive" and self soothe.*

Some students mentioned situations where they engage in other activities in order to feel productive, as if they are achieving something, even when they are not engaging with their academic work. Doing small productive tasks gives students a sense of completion can feel rewarding for students and provides them with a sense of achievement.

For Zara below, she talks about situations when she tells herself that she is being productive when she actually procrastinating by doing small achievable tasks. *"Yeah, productive! But you're not actually being productive. You're just making yourself think you're being productive"* Zara describes how she gets this feeling of being productive through cleaning. *"I feel I can just make excuses for myself and just like go through Instagram and just, not, just put it off, just do like things, even cleaning – sometimes I clean just to not do the work"* This is understandable as the rewards that a student gets from completing assignments is delayed, whereas the rewards from doing a small task such as cleaning is instant. Procrastination is conceptualised in the literature as a self-regulating strategy. By doing a task that feels productive, the student is able to regulate as the cleaning task gives the students a

positive feeling. For the student it is nice to have a sense of achievement when other aspects in the student's life isn't going well (i.e. a challenging assignment or feelings of intimidation with a high word count).

This scenario also relates to the concept of delayed discounting, the reward from doing a small household task gives an immediate sense of gratification, whereas the reward from engaging with a task is less immediate. For students it can also feel as though little progress is being made in particular stages of completing an assignment. For example, researching about a topic for an essay may not be immediately reinforcing, whereas other stages may be more satisfying, such as typing and watching the word count increase.

Other students can get this sense of achievement by keeping their desk tidy and organised. Greg comments that he sometimes lets the idea of being organised take over, at the expense of starting an academic task; *"I always like to have things in arms reach on my desk. So to my left I have all my pencils, my markers, my pens, sticky notes, something like that. ..... So I always focus on making sure my desk is in order, everything's clean."* He described how he prioritises the idea of being organised and tidy over engaging with his academic work. *"I think at times I'm too focused on being prepared and being organized and focused on actually getting the work done"* There is a sense that once have started the task, if they have done the preparations one, tricking the mind in to thinking that they are starting the task.

In the quote below Tina talks about scenarios where she uses self-care as a self-story to justify procrastination. *"So sometimes you might be telling yourself the story that, "Well, I need to look after myself."* Tina may tell herself that she needs to take care of herself and make sure she gets enough sleep and to make sure she eats enough, even when she has had adequate food and rest. However, Tina speaks about her attempts to respond back to these stories and providing a counter argument. *"So I'm like, "Oh, but you've only had eight hours sleep and you need eight and a half." ……Or it's like, Oh it's one o'clock, you must be hungry,"*

*even though you've got up late and you probably had breakfast at 11, and you're fine. Something silly like that"*

For Tina it is clear that self care is a value of hers and she speaks about how it is particularly important during covid the pandemic. Tina describes how she values and prioritises self care, but sometimes uses it to justify her procrastination. "*But it's almost like the pieces that I learned to, like, self-care or whatever pieces that I cling on to them. And I'm like "Oh, no, but I need to do that now.*" She describes in these situations it is like having *"two minds".* One perspective is telling her that she should do her assignment but there is an opposing voice within her telling her that she should take care of her wellbeing. She describes how sometimes the procrastination voice wins. *"But there is those two minds, depending on how I feel, I just go with procrastination probably."* This is another example of inner conflict that students have, in which there are two voices trying to pull the student in different directions.

#### *2.4.2.4 Students' misconceptions around completing coursework.*

Responses indicated that some students have misconceptions around how college work should be completed. Students can have the misconception that they need all the information on a topic before they can start their essay.

Below, Rachel describes how in some instances it is more beneficial for her to delay starting an essay, if it hasn't yet been covered in a lecture. However, she described how delaying starting her assignments, meant she had delayed time dedicated for studying for exams. *"I've noticed that this semester the main reason why I would have procrastinated before the exams was because last semester, we were given the assignments and then we wouldn't actually cover the topic of the assignment until a week after."* Rachel explains how in the past she would have started her assignment ahead of time but then discovered that topics

related to the essay would be discussed in a later lecture. She would then be disappointed as she felt it would've been more beneficial to her to start the essay after that lecture related to it; *"whereas I would get the assignment and do the assignment straight away and then be like, why are we learning this now? Why are we going back over? I would have thought we'd be going over everything before we received the assignment."* Rachel goes on to justify her subsequent procrastination by stating that there's no point in starting the essay before she has gathered all the information about the topic; *"So that makes me have to procrastinate it and wait because if we haven't covered all of it then there's no point in me doing it and submitting it to be like, well, I didn't know that, do you know what I mean?"*

Some of these students, may not be familiar with the critical analysis component of third level education. This creates some misconceptions around how coursework should be completed. In this scenario Rachel is displaying some psychological rigidity. Rachel has created the self-rule that is no point in starting her assignments and her behaviour is being governed by this rule. In reality, there are aspects of the course that she could start ahead of time.

For the most part, the student should be able to start the essay and the relevant lecture may add supplementary material, however it is not essential to have attended the lecture before starting the essay. Students should be able to start an initial sketch and research ideas about the essay. Perhaps it comes from a misunderstanding of what is expected of students and that it is not a regurgitation of the lecture notes. Although the lecture notes can help the student add additional aspects to their essay, but the lectures should not form the basis of the essay.

In many of the descriptions given by students gave around their thoughts and feelings in the moment before they engage in procrastination, there is an aspect of self-conflict in their responses. There is a story for why they should start their task but also a more convincing story as to why they should delay engaging with the task and do an alternative activity. As theme 3,

students are generally aware that their procrastination behaviour causes them stress and anxiety. However, it is by listening to the stories they tell themselves, they end up delaying the task at hand.

### *2.4.3 Theme 3: Self stories imposed by others*

Students internalise beliefs about themselves which have been told to them by their community and by society. This can then affect their identity as a student and in some cases lead to disengagement.

#### *2.4.3.1 Student Identity*

The theme of identity was evident throughout the interviews. According to Social Constructionism perspective, identity is a social construct (Amineh & Asl, 2015). Theme 2 on Unhelpful self-stories provided a description of the how students can feel intimidated and inadequate and how this can add to feelings of being overwhelmed (a risk factor for procrastination). This current section follows on from above and describes how these feelings of inadequacy and intimidation and can be heightened when a student's community has reinforced stigma and feelings of inadequacy.

In the below example, Denise, a 47-year-old mature student highlights how the stigma she experiences is an additional barrier for her to overcome. She also receives learning support for disabilities related to hearing and eyesight. She describes how feelings of self-doubt are at the heart of her procrastination. *"I think what initially stopped me was just pure fear that I was not good enough".* Therefore, in order to engage with her academic work, Denise must overcome the stereotype that mature students or people with disabilities like her should not be in university. *"And it was very real because I felt like, here I am as a university student going back. I'm the second oldest inside of the whole class and the oldest female in the class, let's put it that way".* This stigma around being a mature student and having a disability appears to hold Denise back from reaching her potential. She spoke about fear of being treated differently by

others in her class or an expectation that she would be a role model or parent figure to younger students in the class. *"I didn't want to be a mummy to anybody. And I was afraid that I'd be taken on as a mummy and whatever."*

The quote below further highlights how Denise must overcome stigma around being a mature student and pursuing education later in life. When Denise attempts to study, family members reinforce the idea that it isn't the norm for people her age to go to college. *"Or the main thing is people saying to me and who wants a degree for your age"* There are two conflicting stories that exist for Denise. Education is something that is important to her, but she is also exposed to perspectives of people in her support network telling her that it is not appropriate for those her age to be in education. Denise appears to be able to successfully defuse from some of these thoughts of not being inadequate, displaying psychological flexibility (Hayes et al., 2006)

Lastly, for many students, working from home stripped students of the identity of being a student. Remote working and living with family members can interfere with time students have set aside to start college work. Below, Denise mentioned how her parents would often ask for help, without realising that she is engaged with her work. *"they'll come straight out and say, but I just need you for a minute. It's to show me that I've folded something wrong. And I'm just going to go, seriously, are you doing this right now?"*

#### *2.4.3.2 A sense of connection and belonging.*

Many students mentioned references to a sense of belonging and social connectedness. This sense of otherness could contribute to uncomfortable feelings associated with college work, creating a desire to avoid engaging with academic work. For Dylan, this sense of being on the outside of the student community appeared to put him at risk of dropping out when he initially started his course; *"Like I said, I was moving up from the country and I knew nobody."*

Dylan mentioned that he didn't have many friends in first year and felt like an outsider. He commented how was one of the only students in his class who had come from the countryside, as the majority of his classmates were from the surrounding areas of Dublin; *"And there was very few people in the course who weren't Dubs, and they all knew each other. So I was a bit like the black sheep, and it was hard for me to fit in"*. He mentioned how this made him it was more difficult to integrate, and he feel like he didn't belong. *"And there were cliques, and they would have had their cliques formed"* Various studies reveal how certain groups may be more at risk of disengagement than others. For example, research on how minority groups can be at risk and face additional barriers. Any group that exists in small numbers can be considered a minority. TU Dublin caters towards students from the greater Dublin area. Therefore, students who enrol in TU Dublin (Blanchardstown) from outside this area (i.e., from the countryside) area can easily feel like outsiders (HEA, 2019).

Dylan describes how he almost dropped out in first and second year of his course A contributing factor in not feeling connected to peers was the fact that he wasn't attending lectures. He felt that he didn't necessarily need to attend lectures in order to complete the assignments. *"And I learned very quickly that I was able to fire away all these assignments without going to college. So why would I?"* In second and third year he began to make friends and eventually started to like the course. "*And then as I got in second year, I started to make a few more friends and that was kind of like, "Right, okay, I'll go in now more."* However Dylan states that during the time that he didn't have many friends on the course he came close to dropping out*;"……as well in my first two years I came very close to dropping out when I was in first year. I was like, "This is shite." I hated it. Out of pure ignorance. "I'm not dropping out. I might as well stick it now." And I stuck through it. As the years went on, I got better. And as I got into third year I was like, "This is great."*. There is a lot of research on the importance of being connected to peers and success in third level education. Being isolated is a risk factor

for disengagement and drop out (Hoffman et al., 2002; Strayhorn, 2018) Therefore it is understandable that Dylan was considering dropping out of his course.

During remote learning, some students appeared to be at risk of being isolated. Rachel highlighted how she, as a mature student in first year noticed how younger first years may be at risk of becoming isolated. She described how they enter the course not knowing anyone and which can be frightening. *"this is our first year so you don't actually know the people in your class so you probably just feel like –... well a lot of younger people I think feel like they're completely on their own.."*

The class group chat is also an important way to foster social connection among classmates. Zara also highlighted how the class group chat was important for being able to ask questions easier to classmates that wasn't necessarily as easy in person. *"Cos I feel like you wouldn't go up to someone every five minutes and be like, here, can you help me with that? Whereas you can just send them a text."*

For some, social connection during remote learning was stronger than previous academic years. Below Greg makes the point that a conscious effort was made by the University to foster a sense of community between students at this time. *"The one thing that the University did was just make sure that everybody was comfortable. Even with us, we made a discord server that we can all communicate on from a student level, so we can have game nights or whatever and chat away."* This was important for peer learning but also for establishing peer connections and a sense of community among classmates; *"If we have homework issues, we can all chat away together.... And that's probably something we wouldn't have had in normal circumstances."* Greg's description reflects a sense of togetherness. This is reflective of literature in social psychology on shared suffering bringing individuals together. The collective stress of the pandemic appears to have brought students together. This has been

shown in previous studies on shared suffering bringing people together and fostering solidarity (Bastian et al., 2014)

### *2.4.4 Theme 4: Structuring of time*

#### *2.4.4.1 "Total waste": Wasting valuable rest time.*

Participants spoke about how their procrastination was a *"total waste"* (Rachel). Below Rachel speaks about how procrastination can also waste her valuable free time. While on one hand procrastinating prevented students from engaging with academic work, it also robbed them of time that could be spent on leisure activities, necessary to rest and recharge; *"You're wasting days, like, you're wasting your own time, you're wasting your mind-frame, you're just wasting days"* She speaks about how if she had managed her time better she would have days that she could put aside to spend with her daughter and then days dedicated to work; *"and you could be spending them, as I said, doing something that you actually want to do because if I told myself, I'm not going to do the assignment until such a day and I know I have however many days in the meantime that I can go out and do things with my child or with my friends or my family"* Instead, she has neither, she has spent days procrastinating, which does not qualify as actual rest. *"but I'm not because I'm telling myself no, I'm going to do my assignment today and then I don't do it anyway."* There is a less of frustration here that procrastination is robbing her of actual, productive, free time. In Rachel's case, she had intentions to dedicate time to engaging with her academic work, but she ended up doing other activities instead.

#### *2.4.4.2 Disrupted routine*

For other students, the absence of routine had a big impact on their engagement with academic work. Conor mentions a feeling of being overwhelmed when it felt as though he had hours and hours to do his work, as opposed to a structured window of time to get the work done. *"When covid hit and then you have all of a sudden, twelve hours of a day to yourself to sit at a desk or a laptop, you don't know what to be doing"* Conor describes how this lack of

routine can be very overwhelming for him. *"…..and then obviously your head is racing that you are not getting things done on time, or you are leaving things till the last minute".* A feature of university is that scheduled are imposed on students. Whereas at home, students were forced to self-impose impose their own daily structure. When schedules are imposed externally this leaves the individual with less decisions to be made and more effort is required to plan the day yourself.

It could be argued that in scenarios where a student has difficulty implementing a structure, they are not living in accordance with their values. Above, Conor appears to have the best intentions to start the assignment but appears to struggle to set a routine to stick to when he has to impose his own structure to the day.

### 2.4.5 Theme 5: Inattention, distraction and social media

Many students described situations in which they were distracted by aspects of their environment. In this way, their attention appeared to be pulled away to a more interesting activity.

A number of students mentioned situations in which their phone was a major source of distraction. For example, Conor describes how his phone is a major source of distraction for him. *"Sitting on my phone would be a huge one, or an absolute disaster would be leaving the phone in the room stupidly"* Once he sees that he has gotten a notification, this immediately grabs his attention away from his work; *"and even if it's off, I'd see a screen flashing somewhere so that would be a huge procrastination".* He described how he could get pulled in to looking at his phone for half an hour, because of the distracting nature of social media; "*if I saw a flash, there's half an hour gone and I'm scrolling on Instagram for half an hour, replying to text messages on Whats app or whatever it might be."* There is a sense that Conor understands that by leaving his phone in the room, that it will lead him to procrastinate.

Similarly, Dylan mentions the harmful addictive nature of social media apps such as TikTok. "*Tik Tok as well doesn't help at all. What a disaster of an app. It's great, but it's not at all. I can sit on it for hours, sitting away"* Dylan describes how he wouldn't notice time going by when he is using such apps *"I used to be bad. Now I'd have a game done, and then I'd go on TikTok then and like, "Oh, geez, there's half an hour gone where I could've… half a game."* The appeal of social media was heightened during the pandemic as students didn't have the usual opportunities to connect with peers during remote learning. Students wanted to connect with their friends and classmates and their only way to do this was through social media. Therefore, it is understandable why it was so tempting to spend time on social media apps as this was the primary method of staying connected to peers.

Interestingly, two students (Conor and Dylan), both used the same expression to describe the scenario of losing track of time; "*there's half an hour gone".* Some perspectives of procrastination the literature are of the opinion that students make the decision to procrastinate. From this perspective, they describe procrastination as conscious and irrational (Senécal et al., 2003a), and in the hands of the student. However, in these instances described above where students' attention is pulled to other activities, these students do not appear to be aware, meaning the behaviour is unconscious.

Many students speak about how an attempt to stay connected to peers by using social media and gaming, resulted in them becoming distracted and delaying their academic work. Below, Brendan speaks about a desire to stay in touch and reply to messages from his friends *"sometimes I feel compelled to change tabs and see what's going on……. Maybe I have Facebook open, because I have friends from college who maybe asking about work, and they might need me to answer things for them. I may have messages coming in from friends who might be talking to me".* Interestingly, Brendan uses the word *"compelled"* Brendan,

highlighting how strong the urge is to be pulled away to another activity when he is trying to engage with his academic work.

Similarly, Dylan mentioned how playing Xbox games was an important way of staying connected with his friends. However, for Dylan it also served as a way of procrastinating his academic work. *"I suppose Xbox is a big one for us. We've always grown up and there would've been a set bunch of lads who would have always played Xbox together"*. He mentions how it was a easy way of socialising with his friends. *"and because we were all at home and studying from home, it would have been easy just to text the group chat, "Right lads, we'll hop on Xbox now."* He describes how he would be enjoying the social aspects of connecting with peers, which makes it harder to stop and start his assignments. *"You'd be on for an hour, but then you're talking away and you're chatting away and you're having the craic and you can be gone playing for three or four hours"* He sums up by acknowledging that this is a common scenario in which he procrastinates. *"……that would have been the big one for me now. That would be if I was going to go procrastinate for an evening, that's what I do. I'd just go and chat with the lads and play Xbox for ages."*

A connection with peers (both classmates and friends outside of university) was incredibly important for students during the time in which the interviews were held, (i.e., during the period of remote learning during the pandemic). When this social aspect of everyday was taken away, it was a profound loss for students. Students had to find this missing social aspect through connecting with friends on social media, which likely took away from time that should've been dedicated to study. Therefore, it is likely that social media would have been more tempting than ever before at this time. This is reflective of how students' values shifted during the pandemic and opportunities to socialised were prioritised over academic work. ACT literature makes the point that an individual's values can change at any time. It is likely that

students' values shifted during this time due to the impacts of the restrictions in during the Covid-19 pandemic.

Other students mentioned the difficulty with sustaining attention for long periods, particularly with online lecturers Below, Lauren, reported that she sees herself as someone who was used to being active, and therefore found it difficult to sit and pay attention to lectures. *"Yeah, I'm always on the go. And when me doing the Scouts and other volunteer stuff, I'm always on the go."* She mentions struggling with being confined to a desk when they were used to staying busy. *"That's probably why I found being confined to a computer and at home really hard, because I was always on the go"*. Lauren mentions how the effort required to pay attention can fatigue her body and mind. *"Just mentally and physically tired. I feel, like, sitting in front on the screen was just taking more energy out of me. I think it's just my body just so used to running around for years."* Lauren describes how she struggles greatly to sit still. This is a symptom commonly associated with ADHD (Niermann, & Scheres, 2014). Although the majority of students may not meet the criteria for a diagnosis of the disorder, many students may experience symptoms and therefore are in need of strategies for managing deficits in attention.

### *2.4.6 Theme 6: The scenarios that help*

This section describes four scenarios that help to reduce procrastination, according to student's responses. It describes the responses students gave when they were asked to describe a time when they started and completed an assignment ahead of time. It also includes descriptions scenarios that students mentioned, without being prompted, in which they were motivated to engage with their work.

#### *2.4.6.1 Social accountability*

A number of students made references to scenarios in which they were held accountable by external social aspects. The below examples illustrate how students can be encouraged or

held accountable by family members, peers or by learning supports such as the National Learning Network.

#### 2.4.6.1.1 Encouragement/ Accountability from family members

For some students, their family members hold them accountable for completing their academic work. In the example below, Rachel, a mature student speaks about how her teenage daughter, holds Rachel accountable by reminding her to do her college work. *"She'd be like, oh, good God. Like she couldn't believe it and I was just like, I'll do it later, it's fine and she's like, Mam, it's 4 o'clock! Yeah, but I could start at six [laughs] I have very badly……* "While at the same time, Rachel also holds her daughter to a high standard in relation to schoolwork. *"Eh, I'd be very adamant of her that she has to be a lot higher level of what she has, you know what I mean? But for me at the moment she's like, "Mam, remember your assignments are you going to do them [laughs]. You know? Get in to your homework! That's it, you know what I mean?"* . In this way, they both appear to encourage each other.

#### 2.4.6.1.2 Accountability from peers

Some students mentioned scenarios in which they were motivated to do their work to avoid social judgement from their peers. In the example below, Zara (21) mentioned how she studied better in the library when there were students and other people around. *"I feel like, when, if I'm alone I procrastinate more. 'Cos I don't have anyone to kind of be like, what are you doing?.* Her motivation for engaging in her work in the library is to avoid judgement from others. She feared that she would look "stupid" if she went to the library to study but instead was not focused, like her peers *"Whereas if you're in college, other people are all around you, they're all studying and you're like, right, I'm going to look stupid if I don't so then you study"* She also alludes to the fact that the library is more conducive to study, whereas at home she finds that there are more things to distract her (similar to the responses given in section theme

on attention and distraction) *"and then two hours go by and you got loads done, whereas at home, you've so many other distractions."*

#### 2.4.6.1.3 Accountability from learning supports

Students who were linked in with learning supports had accountability and appeared to be less at risk of procrastinating than their peers for this reason. A number of students who took part in the study were involved with the National Learning Network (NLN) for different learning disabilities. Some of these students had a scribe who assisted them with writing assignment and note taking during lectures.

Below, Jane describes how typically, there is an arrangement made between the student and the scribe to schedule a suitable time to meet to receive learning support. *"So what we did was the head of student services, she gave us a time slot of two hours. So, we just pick whatever, whoever suit the both of us*" Jane describes how normally she struggles to motivate herself to work in the morning time, however, when she had an appointment with a scribe, she is be able to work. It appeared that this arrangement with the scribe gave the student them more accountability. *"I was saying that I know I said about I couldn't work in the morning. But working on my own? In the morning, I couldn't do it. If I was working with someone else, fine."* It appeared that this arrangement with the scribe gave Jane more accountability.

For Brendan, the NLN helped him stay on track with organisation. He describes how it finds it hard to organise himself *" because I would have Asperger's syndrome, or autism, or whatever. That'd be very difficult for me to keep focused on everything and keep making sure that I have organised everything for myself."* He describes how the NLN take on the role of a parent to point out to him what he should be doing. *So sometimes I've had maybe a parent point out to me what I need to be doing.. that's the extension of what they'd be doing for me"* He describes how the NLN are helping him stay on track *"making sure that I'm actually doing*

*these things, and that I'm aware of what I need to be sending in. Have I sent in all the files? Have I made sure all the work is done?"* The NLN make sure that he is up to date on his assignments and hasn't forgotten anything. This appears to hold him accountable. *"And then from there, I can just carry on the work…(…)… because* ***we*** *don't want to leave it up to chance to much. And I want to make sure that absolutely everything is in and nothing is missing or whatever"*. Brendan's use of the word *"we"* implies that the NLN also share the responsibility of making sure he gets his assignments completed and submitted on time.

Brendan describes how the supports provided by the NLN help to keep him organised and aware of the various upcoming deadlines *"And I think that's been helpful because like I said, it's helped with the submission work, and it's helped with my making sure that I'm also organised, because as you might have guessed, when you do this, it improves your organisation."*

In these three examples, students describe how procrastination can be avoided or reduced through holding themselves accountable by external social factors.

#### *2.4.6.2 Feeling worthy*

Some students made reference to having self-belief and feeling worthy of succeeding at third level education.

Below, when Denise was asked about the type of self-talk engages in when she's having self-doubts. She talks about how she consciously tells herself to believe in herself. This is related to Denise acknowledging that by engaging with her work she is pursuing her values. *"Yeah, I really, really have to try to force myself to believe in myself. I'd say justify things, say, for example, why should everybody else get an opportunity and you don't? You should get the same opportunities as other people. So that's one justification."* Denise goes on to say that she tells herself that she's worthy. She states that she reminds herself constantly of her worth *"You are worthy of earning a degree, and going on to get a good job"* It is clear that one of her

values is job progression and security and she makes that her priority, even when she notices feelings of self-doubt creeping up.*"…. get that piece of paper, and have that piece of paper and say to people, hey, I can get a good job with this. I can get a pay rise. I won't be passed over for pay rises or job progression, all the career progression, all of that kind of stuff. Keep reminding myself of all these things."*

For Denise, when she conceptualises herself, she chooses to see the best version of herself (i.e. the person who is capable of succeeding at third level education. She acknowledges that deep down within herself there exists a conceptualisation of self as someone who is not worthy of earning a college degree and getting a good job. It is clear that Denise's values are to have job security and professional success. For her, living in with her values is to pursue education in order to move towards this value.

#### 2.4.6.2.1 Feeling reassured by the lecturer

Many students referred to scenarios where they had a positive relationship with their lecturer, which meant they were more engaged with the work. When students are given encouragement, are feel they have a good relationship with the lecturer they are more likely to be engaged. For example

For Greg, he was more inclined to start his work ahead of time when he felt understood and was given freedom and creativity within projects. *"From day one with our new lecture in this course, we got along very well. She was very open to creative exploration and to people's own interpretation of the project."* When Greg was given more freedom, he was more motivated to do the task. *"I think that just gave me the kind of freedom to just go and do it. Once I met her, I just thought this is brilliant. She's going to be great. "*Greg describes how he felt understood by his lecturers. *"She's going to understand where I'm coming from, and I just flew ahead with the work. I had the work done almost three or four weeks in advance."* Greg appears to value the opportunity to be creative, when he perceives that this is not being

encouraged by the lecturer, he is less likely to be motivated to do the course. The sense of being understood also appears to be important for Greg.

#### 2.4.6.2.2 Intrinsic interest in course material

For Dylan, a sports management and coaching student, when he feels that he enjoys aspects of the course content, he is more likely to be motivated. Topics that he feels are relevant, practical and applicable to life, he is more interested. For example, his final year thesis, which was on a topic he enjoyed. *"I got to do a thesis and all that on something that I was really interested in……..it was on the changes in goalkeeping match actions from 2009/2009 to 2019 and 2020".* He mentions how he wanted to do well in his thesis as it was something he was interested in. *"The thesis, I started it really early. I got all my references, I had everything ready because I just had such an interest in it and I really wanted to do it well because I had that passion for it, and I would have been like, "Yeah, let's start it real early, let's put a good bit of effort into it."* This is reflective of literature on intrinsic motivation whereby the motivation for pursuing the behaviour is not based on external rewards (Ryan & Deci, 2020)

## 2.5 Discussion

This research sought to explore the common scenarios that make students likely to (A) engage in academic procrastination or (B) feel motivated to engage in their academic work. A second objective was to explore students' experiences procrastination and student engagement, in the context of online learning. Analysis of the interviews revealed six superordinate themes capturing students' experiences of procrastination; **1.** I hate myself for doing this; **2.** Unhelpful self-stories; **3.** Self-stories imposed by others; **4.** Inattention and Distraction; **5.** Structuring of time and **6.** Scenarios that help. Many of the themes identified in the interviews were mirrored in the literature review, which will be discussed below.

### *2.5.1 Interrupting the vicious cycle with a compassionate approach*

This study highlighted some of the strong emotions that arise for students as a consequence of procrastination, such as feelings of guilt, shame and frustration. The negative mental health outcomes associated with procrastination has been well established in the literature (Custer, 2018). Literature reveals that students who procrastinate tend to have a higher level of automatic negative thoughts (Flett et al., 2012).

The level of distress some students describe and the physical impact of this distress on their body could be conceptualised as academic burnout. Literature in the area characterises academic burnout as emotional exhaustion and feelings of cynicism towards academic work (Ríos-Risquez et al., 2018). In these situations, the student feels as though their energy is depleted and perceives that they are ineffective at completing tasks (Ríos-Risquez et al., 2018).

What is particularly harmful is the tendency for procrastination to develop in to a vicious cycle, a finding supported by previous research studies (Wäschle et al., 2014). Previous studies reported that this continuous vicious cycle can develop as students feel negatively about upcoming assignments because they procrastinated their last assignment (Oflazian & Borders, 2022).

Similarly, some students experience pressure both from themselves and family members, adding to feelings of shame when the student struggles to engage with coursework. It is well established in the literature that shame is associated with high levels of procrastination (Martinčeková & Enright, 2020). Additionally, literature on motivation reveals that this type of extrinsic motivation (from external factors), can be less motivating for individuals in the long run (Deci & Ryan, 2012; Ryan & Deci, 2020).

To interrupt this vicious cycle of delaying academic work due to avoidance of negative emotions, a compassionate approach is needed. There is strong evidence in the literature on self-compassion as an approach for treating a range of disorders. Compassion Focused Therapy

was first developed to treat shame and self-criticism for a range of mental health problems (Gilbert, 2014). Both shame and self-criticism, can be responsible for the desire to postpone and avoid academic task. If the students' vicious cycle can be interrupted and they can show more compassion and self-forgiveness, this would lessen the impact of the painful self-hatred and guilt students sometimes experience.

Similarly, the literature indicates that self-forgiveness can have positive effects on reducing procrastinating behaviour (Martinčeková & Enright, 2020). Students who showed self-compassion towards themselves in challenging times, also reported being mostly engaged and motivated towards their work.

Compassion focused therapy has been reported to compliment Acceptance Commitment Therapy (Saadati et al., 2021) however few studies have combined the two in interventions for improving mental health outcomes. More specifically, there is a gap in the literature in studies that focus on ACT combined with Compassion focused therapy for targeting procrastination.

It is important that lecturers and teaching staff are aware of which students are consistently submitting assignments past the deadline or requesting extensions. It is likely that these are the students who are most in need of support with regulating these uncomfortable emotions associated with procrastination (such as high levels of shame; (Martinčeková & Enright, 2020). One possible support in TU Dublin (Blanchardstown) would be to link these students in with the National Learning Network.

### *2.5.2 Managing unhelpful self-stories*

Students tended to procrastinate as a result of telling themselves unhelpful self-stories. Students developed narratives as to why they couldn't engage with their work, why it would be hopeless to do some and why it was actually beneficial to delay starting their work. This section also

highlights the self-stories that students have about themselves which have been told to them by their community and society.

#### *2.5.2.1 "I feel so stupid": Scenarios involving feelings of inferiority compared to classmates.*

The study highlights how feelings of inadequacy or inferiority compared in classmates can be at the heart of students' urge to delay their academic work. As identified in the analysis, some students identify with the self-narrative that they are not good enough to be in college or do not compare to their peers and classmates. Therefore, students are likely to avoid their academic work in order to avoid these types of uncomfortable feelings. This is conceptualised in ACT literature as experiential avoidance (Hayes-Skelton, & Eustis, 2020). Acceptance commitment therapy is an approach that is effective for managing feelings of intimidation and inadequacy.

A helpful approach would be to help students bring awareness of the types of feelings that are arising for them in these scenarios. An awareness to thoughts and feelings that arise for students in these scenarios will help in establishing how manage these feelings.

One area that was highlighted in the analysis where students tend to become intimidated, was in the WhatsApp class group chat or equivalent. This was exacerbated by student's tendency to be particularly reliant on their phones during this time with increased smartphone use, a finding supported by previous research (David & Roberts, 2021). This is an area that hasn't yet been highlighted in university policy on student experiences or studies conducted by the Higher education authority.

#### *2.5.2.2 "If I don't understand it, I'll prolong it": Scenarios where the topic is challenging or unfamiliar.*

Many students described how in in situations where they were challenged, the urge to procrastinate their academic work was stronger. This is another example of psychological

avoidance , an unwillingness to tolerate the discomfort of not knowing how to complete the task (Hayes et al., 2004). For some students, disengagement can occur without the appropriate level of support system in place. This finding is supported by previous research on the concept of scaffolding Vygotsky's (1978) that suggests when a task is slightly too difficult, students should be supported appropriately, so that they are able to succeed.

The process of not understanding can be disorientating and uncomfortable for students and often leads to feelings of inadequacy. However, this process is fundamental to learning. By definition, learning amounts to adapting to new situations and challenges (Shuell, et al., 1990). The analysis reveals an unwillingness to experience the uncomfortable feelings of self-doubt. ACT teaches students to accommodate these uncomfortable feeling, by noticing them, creating some distance from them but move in the direction of their values in spite of them.

An important aspect of ACT is to be aware of thoughts and feelings. For students this could mean identifying the feelings that are arising for them and notice them. Identifying these feelings is an important step in regulating emotions and therefore engaging in values lead behaviour (i.e., engaging meaningfully with the academic task)

In ACT, some exercises are known as defusion will help students to create some distance from these thoughts (Törneke, 2021). For example, as an alternative to the student thinking “I can’t do this essay, I’m bad at writing essays”, the student can acknowledge “I’m having the thought that I’m bad at writing essays”. The difference between these statements is that the latter is an awareness of the thought, and an acknowledgement that it is not serving us. Similar techniques exist in Cognitive Behaviour Therapy (CBT) involving distinguishing between what is a thought and what is fact. However, CBT techniques tend to encourage individuals to get rid of thoughts. A recent review of CBT versus ACT interventions for treating procrastination reported that ACT interventions had better long term effects for reducing procrastination behaviour (Kohli et al., 2022).

#### *2.5.2.3 Doing other tasks as a way to feel "productive" and self soothe.*

It was identified that students tend to tell themselves stories in order to regulate their emotions. For example, some students reported telling themselves that they need to tidy up their surroundings or clean their house before engaging with their college work. The literature claims that these can be attempts to self soothe the uncomfortable thoughts that are arising for the student. This reflects the conceptualisation of procrastination in the literature as an attempt to regulate emotions (van Eerde & Klingsieck, 2018).

If students can bring awareness to this behaviour through contact with the present moment and values clarification, this may help the students identify whether their behaviour is in line with their values. Previous research also highlights the importance of bringing awareness to one's thoughts, to avoid becoming fused with every thought experienced (Bardeen & Fergus, 2016). For example, if a student lets the thoughts of "self-care is important right now" take priority, they are fusing with these thoughts. Students also display contact with the present moment as they are aware of the thoughts that they are having and are aware that these are just thoughts. This is similar to some CBT techniques of distinguishing thoughts from facts.

This also raises the question of how students can get this sense of achievement from their tasks. One potential by breaking an assignment into small achievable tasks. Two examples of this are the pomodoro method or the use of SMART goals (Small, Measurable, Attainable, Realistic, Time-bound). The feeling of receiving a reward for doing micro tasks is very motivating and can build momentum, encouraging the student to persevere. This is reflective of applied behavioural analysis and Goal Setting Theory (Locke et al., 1981).

#### *2.5.2.4 Students' misconceptions around completing coursework.*

Students appear to have some misconceptions around completing coursework that can be the source of their procrastination.

Some students have the misconception that their essay must look like that of their classmates. This can then lead to feelings of intimidation and the urge to delay a task. Students should be made aware that the content of an essay can vary from student to student. It should be emphasised that appropriate engagement with the material, critical thinking and effective writing is the priority, rather than regurgitation of information.

Another self-story students may tell themselves is that it is more advantageous to delay starting their assignment until they have gathered all the information about that topic. This is another example of a misconception that students have around completing college work. This is a further example of students fusing with unhelpful stories, a further example of psychological rigidity (Hayes, 2019).

#### *2.5.2.5 Student identity*

From the behavioural science perspective, a students' learning history affects how they engage with their academic work. Learning how someone's learning history affects them is important as it affects how they engage with course material. It is important that teaching staff know who is at risk of procrastinating, so they know how best to support them.

Some students, because of their learning history, are more at risk for procrastinating. This study found that some students have negative experiences of learning in the past, which can affect their current learning, for example being told they shouldn't be in university because of their age or disability.

The literature supports this finding that stigmatised groups can experience stereotype threat and therefore have additional barriers to overcome (Steele & Aronson, 1995), further

contributing to feelings of shame and inadequacy. Research on mature students who also have disabilities, highlighted how this population can be particularly at risk of disengagement (Riddell & Weedon 2014). This is likely related to the stigmatisation that they experienced in early education for having a learning disability, contributing to feelings of inferiority and shame.

However, some students have tools to effectively distance themselves from some of the self-stories that have been told to them by their community. One student, Denise demonstrated an acknowledgement that that the narrative of her incompetent is one perspective, whereas another perspective is that she deserves to attend third level education, just as much as her fellow classmates.

Recent Irish policy documents and reports from the Higher Education Authority reveal an attempt to create a more inclusive education environment in higher education in Ireland (HEA, 2019; AHEAD, 2020). The current study highlights the continued need for appropriate supports for students most at risk. However more needs to be done to support these students in the appropriate ways when they are on the course. While there are supports in place in relation to entry routes for mature students, promoting greater access high education, perhaps there also needs to be support when they are on the course. Universal design learning is a set of principles for designing curriculum that aim to give equal opportunities to students. The principles of UDL could be used to support mature students, students with disabilities or those from minority backgrounds (Zeff, 2007). A suggestion would be to offer assessment and opportunities for learning that allows students to demonstrate their various strengths.

#### *2.5.2.6 A sense of connection and belonging*

This study highlighted how a sense of belonging affected students' engagement with their course. Students can internalise a feeling of being the outsider, particularly if there are

differences between them and their classmates. The importance of social connection and wellbeing is well established in the literature (Pandya & Lodha, 2021)

Responses in this study indicated that some students who move up to Dublin from the countryside can feel as though they are left out of the student community. The university and teaching staff should be aware of students who may be more likely to feel isolated. This is an issue that has not been highlighted in existing literature in the Irish context.

However, students highlighted how during the remote learning, the university made a particular effort to foster a sense of community. This extra effort appeared to be helpful to students. Perhaps, this effort could be continued past the era of Covid-19 pandemic and remote learning. For example, university staff encouraging more informal online platforms for students to connect, such as Discord groups.

### *2.5.3 Time management*

Difficulty structuring time was identified as an issue for students and an issue that often leads to procrastination. Literature on motivation highlights the importance of establishing routines that are automatic and therefore easier to follow. Establishing good habits and routines around completing coursework ensures the student does not have to rely solely on self-motivation, a resource that is finite. Although on the outset it appears that time management is an issue for students, studies also reveal that issues with time management in itself are not enough to explain procrastination. Literature on time management highlights how psychological flexibility is closely related to time management skills (Hailikari et al., 2021). The student may have the best intentions, and time set aside to do the task, but may still struggle to engage in the academic task at hand.

Many students spoke about scenarios where procrastination can take away of important downtime (for example time that could be spent on other activities or with family and friends). Literature on stress and burnout highlight the importance of rest (Sun & Zoriah, 2015).

When students fail to prioritise productive rest and downtime, they are more susceptible to academic burnout (Kroska et al., 2017). Literature also indicates the impact of the covid-19 restrictions meant that students were more likely to susceptible to feelings of burnout (Burke et al., 2020; Zis et al., 2021).

Some students described burnout as an inevitable part of the course. Ultimately, student should be encouraged to identify the kinds of activities that "refill their cup". This is something that needs to be self-imposed as only the student can prioritise their own self-care.

### 2.5.4 *Procrastination involving distraction*

A theme that was identified in many interviews student's attention being pulled away to other activities during situations when they attempted to engage with academic material. In other words, students were being distracted by either their thoughts, or stimuli around them, without being conscious of it.

This description of procrastination contradicts some existing perspectives on procrastination. Some researchers describe students' procrastination as being "irrational"(Senécal et al., 2003b). They argue that students are consciously making the decision to procrastinate. Students' responses in this study indicate that this is not the case in every instance of procrastination. Interview responses indicate that in many situations, students' attention is pulled away to a more distracting stimulus, rather than it being a conscious decision.

In these scenarios there appears to be a lack of self-awareness on part of the students. The distinction between procrastination due to uncomfortable feelings arising and procrastination involving distraction is important. If students' procrastination involves distractions in the environments, perhaps there could be changes made to the environment to reduce this risk. It is important for students to have a study area clear of distractions. This shifts

the focus away from one of blame towards students and raises the question to ask how a learning environment can be designed to be conducive to student engagement.

Unsurprisingly, smart phone use, particularly social media was described by many students as facilitating their procrastination. There has been a lot of recent studies on problematic smartphone use for students and the harmful affects (Yang et al., 2019). In their study, Yang et al (2019) found that problematic smartphone uses positively predicted both academic anxiety and academic procrastination. They suggested improving self-regulation in order to address both issues. Another practical solution would be for students to temporarily disable their social media during periods in the semester when they had a heavy workload.

Additionally, some students mentioned the difficulty to sit and pay attention for long periods of time, particularly with online lectures. Although the majority of students may not meet the criteria for a diagnosis of the disorder, many students may experience symptoms and therefore are in need of strategies for managing deficits in attention. This is an issue that has not been highlighted in the literature on student procrastination. Children and adults with ADHD commonly experience similar issues with attention (Levrini & Prevatt, 2012). A recommendation offered in the literature for individuals with this symptom is to take movement breaks (that can involve standing, stretching or movement) in between study time (Barnett, 2017). This recommendation could also be applied to university students who have difficulty sitting still for long periods during lectures. Lecturers should be mindful of the need for breaks during long lectures to allow for physical movement.

This conceptualisation of procrastination as moving towards a stimuli has not been studied widely in the existing literature on student procrastination. In many scenarios students are not only avoiding and academic task but they are moving towards an assignment that is more stimulating. Various student responses mention instances of their attention being pulled to something exciting and enticing. This finding is supported by behavioural psychology,

which can be conceptualised as behaviour that is positively reinforced (moving towards, or behaving for, some attractive outcome).

This conceptualisation of procrastination as a 'moving towards' behaviour (i.e., becoming distracted by stimuli) should be explored further in Study 2. Students should be prompted explicitly on scenarios in which their attention is pulled away vs scenarios that they do not want to engage with academic work due to the uncomfortable feelings that arise for them.

As the function of procrastination is different in different circumstances (Törneke, 2021), a one size fits all approach to managing procrastination may not be effective. For example, the technique of having a clear desk may not be as effective for students, where avoidance of uncomfortable feelings is at the heart of their procrastination.

### *2.5.5 Scenarios that increase motivation*

An important aim of this study was to explore the scenarios that students' felt motivated to engage with their academic work. Various students mentioned strategies that helped them stay engaged with their work. These strategies appeared to serve as protective factors against procrastination.

The theme of social accountability was strong across many of the interviews. Students reported how in situations when they felt that they were being held accountable by others, for (for example family members, peers, or learning supports such as scribes), they were less likely to procrastinate. In these situations where they were held accountable to someone, they felt more pressure to engage with the work and were therefore more motivated. This is an area that has not been emphasised in the existing literature on academic procrastination.

The concept of having an accountability partner is well established in the literature in other domains. For example, research on exercise shows that exercising in groups or having an accountability partner leads to better exercise adherence (Larson et al., 2018). The concept of

perceived social approval of others is reflected in research on pliance in contextual behavioural science. Pliance is a form of rule governed behaviour associated with high agreeableness and socially desirable responding (Harte & Barnes-Holmes, 2022; Stapleton et al., 2022). There are natural outcomes (rewards) as a result of completing assignments but there are also socially reinforced outcomes (people in the library not thinking you're "stupid). Recent research on pliance conducted in an Irish sample suggests that females may be higher in social pliance than males (Stapleton et al., 2022). Students could consider having a friend or classmate to hold themselves accountable and encourage them to stay focused on the academic task at hand.

Perhaps student representatives should encourage students to establish study groups (i.e., dedicated times to go to the library and study a part of a group). This may encourage students to stay on task and be less likely to get distracted as there is social pressure to stay engaged with the task. Perhaps during this time, the students could give each other their mobile phones, in order to avoid distraction. As discussed above, this would also help to minimise distractions which is a major source of procrastination for some students.

Students who had clear values could refer to them in times when they wanted to motivate themselves. The importance of clarifying values is well established in the literature. Encouraging students to clarify their values for attending third level education may help them to prioritise why doing their assignment is important to them.

An ACT based study by Chase et al., (2013) revealed that a combination of clarifying values and goal setting training significantly improved GPA in a student sample. Goal setting training alone showed no effect on GPA. This highlights the importance of clarifying values for improving academic performance. Chase et al., (2013) suggest the implementation of online training modules for exploring values by asking students to reflect on their academic values and make choices about what is important to them.

The current study explicitly explored students' reasons for attending third level education as a means of exploring student values. Study 2 should note whether students bring up values without being prompted. This would reveal whether students' values are at the forefront or whether they have not yet determined why being in third level education is important to them. It would also establish whether the student's values are intrinsic or extrinsic (Deci & Ryan, 2012)

## 2.6 Conclusion

This research addressed a gap in exploring the types of scenarios that students tend to procrastinate. There has not been limited qualitative research on the topic of academic procrastination informed by acceptance commitment therapy. This study addresses that gap. Some quantitative studies on ACT and procrastination have informed this study and in relation to the conceptualisation of procrastination from the ACT perspective. For example the conceptualisation of procrastination as an example of experiential avoidance (Gagnon et al., 2019b).

This study addressed a gap in that it explored into students' experiences of procrastination (i.e., the scenarios in which procrastination occurs) from the perspective of ACT and existing theories in the area. The majority of research on procrastination focuses on self-report measures of personality constructs, for example the extent to which someone who procrastinates also displays low conscientiousness. An important aspect of this study was to analyse the function of the individual's academic procrastination, something that is not emphasised in existing studies on procrastination (e.g., personality, cognitive, and motivational perspectives). By examining the function of procrastination for each individual, a greater understanding can be gained in to the how the behaviour can be managed.

A limitation of this study is the characteristics of the sample. There was a self-selection bias on the sample. As students were recruited in online lectures, it meant that the students who

signed up for the study were characteristically obliging and eager to take part in the study. Many of the students recruited appeared to fit the profile of students who were generally motivated. This was related to the recruitment strategy used, (i.e., recruiting through an expression of interest form during online lectures). It is likely that students who tend to experience procrastination may not have been present or engaged at these lectures.

As well as the sample being eager to participate, the characteristics of the sample may not have reflected the student population on TU Dublin Blanchardstown campus. The sample had a greater number of females than males (7 females: 5 Males). The sample also included a disproportionate number of students with additional learning needs than the general student population (i.e., 4 students reported being supported by the National Learning Network). Therefore, the data may not have included all the perspectives of the targeted sample (i.e., undergraduate students at TU Dublin Blanchardstown).

This study highlighted some of the scenarios that make students likely to procrastinate, specific to online learning. Some of these scenarios discussed above difficulties in; paying attention to online lectures leading to disengagement; asking questions to lecturers through email; self-imposing daily structure and; managing disruptions from family members.

### *2.6.1 Rationale for Study 2*

The current study provided important insights into student procrastination and motivation at TU Dublin (Blanchardstown campus). Study 2 should build upon the perspective gained in study 1 by gathering a range of perspectives (i.e., by gaining insights from students more likely to engage in procrastination). This can be achieved through targeted sampling. By gaining more perspectives of the student population, this study can better answer the research question.

**Rationale (A) Exploring perspectives from a wider range of participants.** Study 2 should target a different sample using alternative recruitment strategies to address the

shortcomings in the Study 2 sample. This would ensure a range of perspectives are gathered to answer the research objectives (outlined in methodology section).

Firstly, students in Study 2 tended to be enthusiastic to participate (due to the sampling strategy of recruiting in lectures), Study 2 should use an alternative recruitment strategy and aim to target students who are likely to be less eager to participate (i.e., recruiting during leisure time on campus in a common area).

Secondly, particular students that should be targeted in Study 2 include non-mature students as mature students were overrepresented in this study. Lastly, it is also important go gain perspectives of more students who not linked with learning supports, which can be achieved by not directly recruiting from a contact in the National Learning Network.

**Rationale (B) Further exploring themes and issues highlighted in study 1:** Some important issues from analysis of study 1 required further exploration. Study 2 should expand on this study by;

- Explicitly prompting questions about the distinction of procrastination involving moving towards a distracting stimulus and procrastination moving away from uncomfortable feelings.
- Further exploring unhelpful self-stories that students have around procrastinating.

# Chapter Three

# Study 2

## 3.1 Chapter Overview

This chapter presents the second study in the thesis. The overall aim of this study, in keeping with the aim of study 1, was to identify the kinds of scenarios that make students likely to engage in procrastination and the scenarios that are motivating. This research aims to build upon study 1 by gaining perspectives of students who may be likely to procrastinate, from a sample of undergraduate students at TU Dublin (Blanchardstown).

Objectives:

- Explicitly target students who may be more likely to engage in procrastination, in order to get a range of perspectives representative of the student population.
- Explicitly explore students' experiences of scenarios of procrastination when the student becomes distracted.
- Explicitly explore unhelpful self-stories that students have for rationalising their procrastination.
- Build on the sample gathered in study 1, by explicitly targeting demographic groups that were underrepresented (i.e., non-mature students, students from a range of backgrounds, not recruiting students directly from the NLN).

## 3.2 Methodology

### *3.2.1* Participants

7 students were selected for inclusion in the study. All participants in the study were male. This was likely due to the sampling strategy used (described in sampling strategy below). However, over half of participants in study 1 were female, therefore it was necessary to gain the perspectives of more male students. The median age of participants was 20 years. Only 1

student out of 7 was a mature student, as 3 mature students had already been recruited in Study 1. There were less mature students in the sample and the age range (18-24) was narrower than study 1 (20-47). The sample included a greater range in diversity in terms of race and ethnicity than in study 1 (see table 2 below for participant demographics). The sample included Irish Nigerian, Irish Asian and Central European students.

All students who were recruited had either continuous assessments or exams in the coming days/weeks. This indicated that the recruitment strategy was effective, and some students were likely using their participation as a way to procrastinate their academic work.

**Table 3**

*Study 2 Participant Demographics*

| | |
|---|---|
| Gender | 7 Male/ 0 Female |
| Median age | 20 years (range 18-24) |
| Mature students | 1 |
| Students with disabilities | 0 |
| Receiving SUSI grant | 3 |
| Nationality | 3 Irish; 1 Nigerian Irish; 2 Asian Irish; 1 Eastern European |
| Ethnicity | 4 Caucasian; 1 Black; 2 Asian |

### *3.2.2* Sampling strategy

An alternative sampling strategy was implemented in Study 2 than Study 1. This was in order to avoid a self-selection bias that occurred in Study 1 (i.e., recruiting students from lectures who were eager to take part in the study and generally more motivated towards their studies). In order to gather a range of perspectives on the topic of student procrastination and engagement (i.e., both students who were motivated and those more prone to procrastination), purposeful sampling was used.

#### *3.2.2.1 Purposefully targeting students likely to engage in procrastination*

Students were recruited during the final month of the final semester. This time was specifically chosen as it is directly before students' exams and final continuous assessments. A

defining characteristic of academic procrastination behaviour relates to students waiting until the deadline is approaching before beginning the task (Steel & Klingsieck, 2016). This indicates that the weeks before the deadline students are putting off engaging with the task. This research aimed to catch students during this window of procrastination behaviour (i.e., the period before exams).

Students were recruited in person from the common area on campus, an area that students typically spend socialising between lectures. This is the central location to socialise on campus and there are a number of amenities close by such as the canteen for refreshments, the sports hall and the student's union. The researcher approached groups of students and gave a pitch of the nature of the research project and information about what was involved in taking part. To entice students to take part, potential participants were told that by taking part in the interview it might be helpful for them as it could help them clarify their goals and values before exams. This technique of appealing to an individual's values is based on the principles of ACT (Hayes, 2012).

Students who agreed to be contacted to hear more about what was involved in taking part in the study wrote their name and email address and/or phone number on a sign-up sheet. Of the 16 students who agreed to be contact to hear more about taking part in the study, 5 students responded to the follow up correspondence to take part in the study. 2 additional students were recruited through snowball sampling.

#### *3.2.2.2 Purposefully targeting a range of demographics*

This research aimed to recruit students from all demographics through purposeful sampling. It was noted in Study 1 that the perspectives of mature students had already been represented (i.e., 3 out of 12 students were mature students). Therefore, this study sought to sample non mature students where possible. Similarly, students with disabilities and neurodivergent students were not a priority to recruit in this study as they were overrepresented

in the sample in study 1 (i.e., 5 out of 12 students were linked in with the NLN for educational supports). This was due to direct sampling through a contact in the National Learning Network. In Study 2, students were not directly recruited from the NLN. Students were not discriminated against in the sense that they were not asked to disclose if they were linked in with the NLN during recruitment but were asked during interview stage.

### 3.3 Procedure

All interviews were conducted in person except for one (to accommodate the needs of the student). They were conducted in a common area and or in a private room on campus. Interviews were recorded either on a laptop or on a phone. The interview guide was based on the interview guide from study 1 but was updated to explicitly probe questions related to (i) procrastination involving distraction, and (ii) the kinds of self-stories that students have for justifying procrastination (see appendix 3 for study 2 interview guide).

In order to entice a different profile of students., i.e., students less willing and eager to take part in research, a small reward was offered for taking part in the interviews. Participants in this study were offered a 5-euro lunch voucher for the canteen for their participation. They were also reassured that they could leave the study at any time, and that they could keep the voucher. No participants left the study early. One student was referred on to university supports for help with managing anxiety related to academic work after he had identified this in the interview (as in line with the ethical procedures).

The methodological approach used in this study was the same as study 1. The approach used was Reflexive Thematic Analysis (TA; Braun & Clarke, 2021) incorporating a complementary combination of Interpretative Phenomenological Analysis (Smith & Shinebourne, 2012) and Discursive Analysis (DA; Wodak & Krzyzanowski, 2008).

## 3.4 Findings

**Table 4**

*Study 2 Findings*

<table>
<tr><td rowspan="8">Theme 1: “I get distracted”</td><td colspan="2">A chronic problem</td></tr>
<tr><td rowspan="3">Distracting scenarios</td><td>Interruptions from family members.</td></tr>
<tr><td>You have 1 new notification.</td></tr>
<tr><td>Down the rabbit whole of distraction/ immersed in other activity.</td></tr>
<tr><td colspan="2">“I’m not in the right mind to do it” (I need all conditions right before I can start).</td></tr>
<tr><td colspan="2">I’ll wait until I “feel more comfortable”.</td></tr>
<tr><td colspan="2">I need to have all the information before I can start/ continue.</td></tr>
<tr><td colspan="2">I can’t do it because I might fail.</td></tr>
<tr><td rowspan="2">I know what I’m doing, this works best for me.</td><td>“I have plenty of time”.</td></tr>
<tr><td>I work better last minute.</td></tr>
<tr><td rowspan="2">Theme 3: The scenarios and strategies that help</td><td colspan="2">“A good friend group is quite important”.</td></tr>
<tr><td colspan="2">Finding the work environment that suits you best.</td></tr>
</table>

### *3.4.1 Theme 1: “I get distracted”*

This section refers to procrastination stemming from situations in which the student has become distracted (i.e., their attention is pulled away from the task at hand). For some students, this impulsive distraction while trying to engage in academic work is a chronic problem. While for others, there are particular scenarios that are more distractive than others. Distractive procrastination as a chronic problem and particular distracting scenarios will be described below.

#### *3.4.1.1 A chronic problem*

Jamie, a final year cyber security student, reported experiences that epitomised chronic procrastination. At the time of the interview, Jamie had failed his thesis twice and was on his third attempt. As per the excerpts examined below, Jamie mainly/largely attributed these difficulties to his tendency to become easily distracted.

Jamie described himself as the type of person that has very broad range of interests but also a low attention span: *"I tend to, like, hop from activity to activity"*. This impulsive curiosity can sometimes pull his attention away from the task at hand, which unfortunately affects his academic engagement.

Often when Jamie intends to engage with an assignment, he finds that his attention will *"deviate elsewhere"* towards an alternate activity such as *"reading about science or something"*. When asked if he notices his attention switching to another activity, he describes how it appears to happen unconsciously "*I think I'm more pulled out rather than me making the active decision to switch over"*. This is further evidence that procrastination often occurs when the student becomes distracted is not always a conscious irrational decision.

Jamie provides an example of being enticed into other activities without realising. "*For example, if I was theoretically, maybe someone who was studying culinary arts or something. And then I meet someone who was an artist. And then it's like "oh do you want to draw, oh that's interesting, turns out you're good at drawing". And then I slowly merge to the other field and that's really oh, I'm really distracted now and I'm here deep into this completely different field that I'm in*" In this way, Jamie describes how his procrastination happens to him and is out of his control. In other words, he may intend to focus on the task at hand, but his inattention makes this very challenging.

Jamie reported that during the time he had failed his thesis he had recently began a new job and this interfere with his ability to manage his time. He commented that *"that a lot of companies tend to swoop in and poach the students before they graduate"*. This appears to be particularly common in the IT sector *"Especially with my course [Computing]. There's a lot of job opportunities and companies coming in, so it's natural for us"*. Lecturers appear to be aware of this and make attempts to address the companies: *"the College tried to ask these companies "can you be less aggressive with your recruitment. Can you maybe recruit around May instead*

*of March or February?"* This is a scenario that has the potential to contribute majorly to student's tendency to deprioritise and delay their academic work.

A number of times throughout the interview Jamie brought up that he suspects he may have an attention problem that requires the attention of his GP but has not yet been to see a health professional for the issue *"I want to I kind of want to see a GP over it because is that normal?". This* suggests that he may feel some shame or stigma around his difficulties with attention.

Similarly, responses from Philip, a second-year creative digital media student, indicated that his procrastination is a chronic problem related to inattention. He describes that he has struggled to concentrate during every lecture he has attended. *"there's not one lecture I think I can recall where I paid attention".* He describes the scenario of sitting in a lecture hall but being unable to concentrate on the content of the lecture. *"Sometimes I'm sitting there in the lecture hall, if I'm bored, I get very hyper-focused on something. I get into a state of mind where I focused on just one thing like maybe like moving my feet ……. and whatever's being spoken about on the board is just not interesting to be in the slightest".* Philip's inability to refrain from moving his feet is indicative of impulsive personality traits (similar to traits of ADHD), described as 'fidgeting'(Levrini & Prevatt, 2012). Philip's story also highlights an important point about the appearance of engagement. On the outset, Philip is showing up to lectures and may appear to be engaged in his studies, however his engagement is superficial as he is not engaged with the lecture.

Although Philip has a genuine difficulty paying attention in lectures, it appears that he also puts additional barriers in place that prevent him from being able to engage with the course material. Philip admits that he sometimes puts his earbuds in during in-person lectures to listen to music and justifies this by using the narrative that there is no point trying to engage with the material as he cannot concentrate. This is an example of psychological avoidance in that Philip

is avoiding dealing with the uncomfortable feeling that arises for him when he attempts pay attention to the lecturer (feelings of self-doubt as a result of being challenged by the course content). He is rationalising this disengagement by telling himself that there is no point in paying attention as he will not be able to focus anyway (Further examples of Philip's self-stories for justifying procrastination are discussed in Theme 2).

Both Philip and Jamie's responses indicate a chronic distraction problem whereby they are unable to concentrate on the task at hand which ultimately leads to disengagement from their academic work.

#### *3.4.1.2 Distracting scenarios*

This section describes the types of scenarios that are particularly distracting for students which ultimately leads to their procrastination.

##### 3.4.1.2.1 Interruptions from family members

This is a scenario that students reported being particularly distracting. For many students, distracting scenarios were exacerbated as a result of remote learning during the pandemic. These distractions can often come from interruptions from family members.

This was the case for Liam, a first-year student for a number of reasons. He described how living in close quarters with family members created a distracting learning environment. *"Yeah. TV. My grandparent lives with us. He's hard of hearing, so his TV is always up very high, so it gets very hard".* Liam felt he would be *"more focused"* if he was studying at college than at home. He also described his home as being particular busy and disruptive, living with younger siblings during the pandemic.

Liam spoke about the impact of living with family members with compromised immune systems and the subsequent need to reduce his social contact during the pandemic. He also has some care giving responsibilities towards younger siblings. These factors coupled with a busy

distracting environment likely contributed to stress for Liam which likely affected his motivation for completing academic work.

Roger, a 19-year-old accounting and finance student, also highlighted how disturbances from family members was sometimes a source of distraction which ultimately contributed to his procrastination. Roger is a student who prefers to have a separation from home and college. He reserves college for lectures and socialising but completes assignments from his kitchen at home. He mentions how this generally suits Roger best, as his parents are either working or sleeping after doing a night shift.

However, Roger describes how there are sometimes situations when the house becomes busier and he becomes distracted by family members when he is doing his college work in the kitchen *"There could've been the odd time, like where my mum wants to cook, so she walks into the kitchen and starts making noise and I get distracted, or she needs my help with a few things."* In these situations, Roger may struggle to return to his studies when his attention has been pulled elsewhere. *"So, I have to put down what I'm doing, and I forget about it and come back later and I'm too tired to continue."*

#### 3.4.1.2.2 You have 1 new notification.

This is a particular important source of distraction as students have their smartphones or other devices with them in most contexts. There is also evidence that smartphone use increased during the Covid-19 pandemic (Mack et al., 2021), which likely increased occurrences of this scenario.

There was a lot of consensuses that notifications from devices can pull students' attention away from the academic task at hand and subsequently contribute to procrastination.

Philip describes how he frequently becomes distracted by notifications. Although Philip successfully manages to get to the desk and make a start, the difficulty lies in maintaining

attention. However, when Philip is seated, he receives a notification, and his attention goes there. *"Majority of the time I'd say I'd get to the desk and then I'd do the title and stuff, and then immediately I might get a notification from some app on my thing, and I go check that out, and then I get distracted again."*

Philip's ability to get to dedicate time to sit down at his desk and attempt to engage in the task indicates that he has a genuine intention to make progress on his work. Anecdotally students are told that the hardest part of essay writing is making a start (Warburton, 2020). It appears for Philip he can make the start but struggles to sustain attention to engage meaningfully with his work.

Similarly, Kevin, a first-year engineering student, struggles to study from home for the very reason that he is more likely to check notifications on his phone or laptop. *"Well, it really depends on where I'm, like, studying or working. But if it's in my house….it'd be so difficult…….if like, a friend text me or something….Or I sit in front of a laptop, so just some notification pops up."*

Interestingly Kevin described how he would be less likely to check his notifications if he was studying from cafe, which he describes as his preferred location *"When I'm in a coffee shop, when notifications and stuff pop up……. I'm not overly distracted".*

On the other hand, at home he is more likely to respond to texts, *"I feel overly comfortable at home, so I feel like I can respond".* This suggests that Kevin has established a separation between his work environment being purely for work, and his home environment being for rest. This explains why he would be more likely to respond to distracting texts at home. It is therefore understandable that Kevin struggles to study at home, as when he receives a text, it is occurring in the context of the relaxed environment and therefore he is more likely to respond.

#### 3.4.1.2.3 Down the rabbit whole of distraction/ immersed in other activity

This is another type of context that can be particularly distracting for students. Responses indicated that often when the student's attention has been grabbed, there is a tendency to become mindlessly immersed in that new activity. In other words, often once students' attention is pulled away to a distracting stimulus, they can stay in this period of distraction for several minutes.

This complete immersion can come about from a conscious decision to take a break while studying and when doing so, decide to use their phones. This is frequently the case for Robert, a first-year engineering student from central Europe who moved to Ireland to study. For Robert when he feels he needs a break, he goes on his phone as a break. *"I was studying yesterday, and I didn't understand it, and I was stuck for two hours, I think. I found myself browsing on Instagram again, because I was like, "Fuck it."* Interestingly, Robert reported that he is more likely to become tempted to become immersed in social media when he is encountering a challenging aspect of the course material. This indicates that in situations where he is challenged, he may be more likely to become distracted. This is reflected in literature on the tendency to avoid aspects of course material that are challenging (Blunt & Pychyl, 2000).

Robert describes the moment he realised has lost track of time when using his phone during a break. *"Half an hour was gone, and I was still browsing on Instagram. Then I realized, "Oh, what am I doing?"* Often what is intended as a short 5-minute break can turn in to several minutes of mindful scrolling that is out of the student's control *"it's very hard to stop, so it's very hard to control yourself".*

Philip described a similar scenario of being mindlessly immersed in another activity. He described a typical scenario of choosing the appropriate music to listen to while he did his work. This can lead him down a rabbit hole of choosing song after song until the point that he

is completely removed from the academic task he had intended to do. *"I might go into YouTube to play background noise or something, and then I actually start watching the video, and then I just get into a state of going through video after video or listening to music on Spotify".*

In both of these examples it is social media and technology that has led students into an unconscious state of immersion. It is the unconscious aspect of being immersed in another activity for long periods is what is dangerous as there is the potential to lose a lot of time.

### *3.4.2 Theme 2: Self stories*

This section illustrates some of the self-stories that students are inclined to tell themselves to justify procrastination. There are different kinds of self-stories but each one serves the same purpose of avoiding engaging with the task at hand.

#### *3.4.2.1 "I'm not in the right mind to do it" (I need all conditions right before I can start).*

Students tended to tell themselves the story that they needed the most optimal conditions before they could start or proceed with their academic work.

##### 3.4.2.1.1 I'll wait until I "feel more comfortable"

For Liam, he feels as though he cannot engage with his work until he feels less anxious. He attributed most of his procrastination to *"over-worry".* He believes it is best that he waits until he feels more capable and less anxious before starting his work. *"Because sometimes I just can't focus on stuff because I'd be paranoid and say, 'I'm not in the right mind to do it' And then it comes to the day before the essay is due, it's like "Oh, Jesus, I should have done it two days ago."* Liam believes that in order to do his work, he should not have any feelings of paranoia or self-doubt, which is an impossible feat. This reflects psychological avoidance as Liam wishes to avoid the feelings of self-doubt (Hayes et al., 2004).

As a result, each time he encounters a challenging aspect of the course and feels uncapable, he decides to delay starting his work until he does feel capable. The trouble with

this approach is that these feelings of incompetence may not subside. In other words, if Liam gives up or postpones his work each time he encounters a difficulty, he will not make progress. The ACT perspective encourages students to acknowledge and tolerate these feelings of anxiety and self-doubt proceed in spite of them (Hayes, 2019).

Similar to Liam, Kevin tends to tell himself the self-story that it is better to wait until he feels less tired before starting his academic work. Kevin describes how in the morning time, he sometimes puts off starting his work until his body feels more alert and therefore more ready to start the task at hand.

He describes how when he wakes up, he is met with a sense of dread *"So it is like, I do wake up. I'm like, oh my God"*. Although Kevin tells himself he will study at a certain time, it is this dread that leads him to come up with the story that it is more beneficial to delay the task *"But then I go off and I procrastinate and I think 'I'm like, way too tired'….. I'm way way too tired. I just don't want to do it. But I'd wait a little bit until I'm more woken up or I feel more comfortable. I'd wait a little bit until I'm more, like woken up."*

Kevin is waiting until the optimal conditions before he can start. He wants to be more *"comfortable"* before he can start. This reflects the conceptualisation of procrastination as a way of regulating discomfort (van Eerde & Klingsieck, 2018).

Both scenarios above reflect the stories tell themselves in relation to the need for a feeling of "readiness" before they can start an academic task. While for Liam it is his mind that needs to feel ready before he can start the task, for Kevin, it is his body must feel in optimal state. Both scenarios reflect psychological avoidance.

#### 3.4.2.1.2 I need to have all the information before I can start/ continue.

In other scenarios, students described situations in which they felt they had to have all the information about an assignment before they could proceed with it.

Liam describes the scenario of writing an essay but wanting to wait until he knows what he will write about before he starts. He justifies his procrastination by telling himself that he needs to know everything before he can start his essay. *"I want to get a better understanding of what I'm writing first. But then it gets to the stage where the deadline is close. And I think I should have started earlier".* Ultimately this approach does not serve Liam in the long term as he means he is left with little time to complete his essay and it means he has to write his essay while under pressure.

Liam believes that he must already know how to write the essay before he can attempt it. In reality, it is natural students not to know exactly what they will write about when they attempt essays. That is why students are encouraged to make drafts of essays encouraging a more iterative process than an all in one go approach (Warburton, 2020).

This stress is amplified by Liam's low level of belief in his own capability of completing the assignment to the standard expected. He feels that if he learns more about how to complete the assignment, he will be better placed to complete it. *"Because the essays were worth 20%. It's the feeling that, If I start early that I wouldn't fully understand what I'm supposed to do and would lose marks on it".* Ultimately, Liam's responses reflect a low level of belief in his own ability which is reflective of literature procrastination and low levels of self-efficacy (Klassen et al., 2008a).

In Liam's interview he also makes reference to asking his classmates for reassurance about assignments *"I'd say, 'How do you find this?'"* There may be as aspect of waiting on reassurance from friends about how to complete assignments before he feels he can start himself. (More on the importance of peer support is discussed in theme 3).

Similarly for Kevin, when he feels that he is not able to do something, he tends to procrastinate. *"Only if I'm stuck on something hard, then I procrastinate. I don't really want to*

*do it because obviously if you're stuck on something, it's not very enjoyable. I think that's pretty much it."*

Kevin is happy to proceed when he feels he is able to do the assignment and it is "enjoyable" but no longer wants to do it when it becomes too challenging. *"For example, if I was building some project or some machine or some circuit and I don't understand how it works or it doesn't work for some reason, and I don't know why it's not working. Yes, I'd be frustrated and procrastinating."*

Kevin describes how he may reach out to the lecturer but does not feel satisfied with their help *"And sometimes you ask the lecturer or the teacher something. Some of them aren't always the best because to be honest, some of them don't seem to know what they're doing."* Similarly, this scenario also reflects an avoidance of the discomfort of being challenged by a task. Kevin doesn't make any reference to asking follow up questions when he doesn't understand the teachers explanation.

#### 3.4.2.1.3 I can't do it because I might fail

Some students feel as though there is no point in spending time on their assignment as they believe they're going to fail regardless. This is the case for Philip who does not want to do his work because he feels it is inevitable that he will perform badly. *"You get very nervous and you're like, 'No matter what I type, it's going to sound bad.'"*

Philip does not like the idea of his work being criticised. *"I think it's a lot of just self-doubt because I feel like a lot of people might be worried about having their work criticized, because sometimes when you get your work criticized, sometimes, even though they may want it to be constructive sounding, it doesn't sound constructive sounding".* Philip's responses indicates that the feedback offered from teaching staff is sometimes demotivating for students.

For Philip the idea of writing a badly written essay is stopping him from making any attempt. He talks through what is going through his mind in this scenario "*I'd say, where you're just like, you really don't want to sit down and type out, like, think in your head and type out all these words that you're not even sure if it's going to sound good."* Philip's response indicates a fear of failure which is closely linked to procrastination (Zarrin et al., 2020).

Similarly, Liam is afraid to do his work because he has a severe fear of failure. He describes himself as being "*Very paranoid"* about failing exams to the extent that it is preventing him from engaging with his work "*I would second guess myself like, "Is that the right answer?" That would also feed into the procrastination."*

His fear of failure is so extreme that he can get worked up about failing aspects of the course that are worth only a small percentage of his overall grade. *"Say I've had a quiz, that's 5%, I'd say, "Oh God, this is such a big thing."* He describes how often, on reflection, he can acknowledge that the task was manageable, however at the time it causes him a lot of stress *"There'd be multiple choice questions and you'd find it easy enough. It would run me down".* This description suggests the toll that the stress and anxiety around academic work is having on him. It appears that each stumbling block (i.e., difficult aspect of the course) leaves him feeling incapable. Practically, one cannot learn, grow or make progress without encountering challenges (Shuell, et al., 1990).

Liam often catastrophises what would happen if he failed an exam. *"In my head it was the end of the world if I didn't get good grades, even though I can redo the exam if I want to"* This fear of failure stems from the extent to which his identity is caught up in his performance. Liam's whole self-worth hinges on him failing (i.e., he is overly harsh on himself). He interprets failure of an aspect of the course to mean that he is a failure. In other words, he derives "I have failed an aspect of the course" as "I am a failure".

In this way, Liam's anxiety about performing can be debilitating. His fear of failing is preventing him from engaging meaningfully with his work. From the ACT perspective, individuals such as Liam, who exhibit high levels of anxiety struggle to create distance from these kinds of unhelpful thoughts that prevent them from engaging in their work (Constantin et al., 2018). In other words, those with anxiety find it harder to unhook from the kind of thoughts such as "I am a failure". Following the interview, Liam was referred on to university supports for help with managing his anxiety, in keeping with ethical procedures.

#### *3.4.2.2 I know what I'm doing, this works best for me.*

##### 3.4.2.2.1 "I have plenty of time".

A number of students mentioned scenarios in which they perceive that they have plenty of time to do assignment but often end up under pressure to complete the assignment before the deadline.

Kevin notes the sense of freedom that exists in third level, after entering directly coming the from leaving cert. *"Secondary school? There's not as much freedom as College"* He notes the lack of *"rules"* that exist in third level indicating the responsibility that students must impose on themselves to get through coursework. *"I feel like, in a way, since, you're in College, you can technically do whatever you want. There's not a lot of rules restricting what you have to do with that"*

Despite being only the youngest in his class, (beginning university at17), Kevin is aware that is perception of having a seemingly unlimited amount of time to do assignments is not the case. This awareness encourages Kevin make the conscious decision to impose his own "rules" on himself for getting his work done. *"So I don't want to lose my responsibility and not keep up with my studies and stuff".* In section theme 3, Kevin outlines how a good friend group helps

him to stay focused and less tempted to fall into the narrative of thinking he has more time than he actually does.

Kevin's point about the need to have his own *"responsibility"* over his studies related to Self Determination Theory. SDT suggests that doing an activity purely for external rewards (such as praise from a teacher or fear being reprimanded) can be classified as extrinsic motivation (Deci & Ryan, 2012). For students in third level who exhibit intrinsic motivation (i.e., doing the task purely for its inherent satisfaction) the danger of this sense of freedom and independence may be less of an issue. However, for students who are motivated by immediate feedback by teachers (whether it is praise or fear of being reprimanded), this sense of freedom may contribute to their procrastination behaviour. In other words, students understand that they will not get in trouble if they do not do their work, (as they once did in secondary school) and therefore may be more likely to procrastinate. Many studies indicate that intrinsic motivation increases as students' tendency to procrastinate decreases (Girelli et al., 2018; Malkoç & Kesen Mutlu, 2018).

Relatedly, the repercussions for not engaging in work are often delayed (i.e., receiving grades at the end of semester) and therefore viewed as less important, reflecting literature on delay discounting (Sutcliffe et al., 2018).

Similarly, Philip often tells himself that he has plenty of time to do the assignment, leaving himself with little time to get the assignment complete. "*I'd put off work a lot. I'd be like, I have plenty of time, I have nothing to do, and then I'd end up doing it all last minute".* Philip admits that often in these situations he tends to *"underestimate the workload",* assuming that the assignment will not take as much time as it does *"I can probably get this done fairly quickly."*

This leaves Philip believing that he has more time to do other activities *"Then I'd go off and do one of my things. I'd probably play one of my instruments. I'd go play video games*

*or binge watch something."* However, this often leaves Philip under pressure with having to finish assignments quickly, being forced to complete it to a lesser standard than he had hoped. *"Then suddenly I'd realize, "Oh, it's close to the deadline, I got to do this." Then I'd rush it very badly".*

When asked if this was also the case during Covid, he highlighted how this was particularly relevant during that time as he felt that he had unlimited time *"I kept pushing it back, because it was just unlimited amount of free time, so I could just go do whatever, and then I'd be like, "I'll have time to do it later."* The concept of having an unlimited amount of freedom is related to a lack of structure to the day during the pandemic (Morris et al., 2021). Both Philip and Kevin acknowledge the feeling of having an unlimited amount of time serves as a temptation to procrastinate.

#### 3.4.2.2.2 I work better last minute

Similarly, John believes his procrastination makes him more efficient and suits his lifestyle. He conceptualises his way of doing work as *"scheduled procrastination"*. John is a 24-year-old general business student. He falls in the category of mature student as he is over the age of 23. He had previously started an engineering course but exited the course after three years *"I tried to persevere with that, but I had the ability but not to drive*". He has an unusual sleeping pattern in which he stays up all night and sleeps during the day, describing himself as being a *"nighthawk*".

John makes the argument that it makes sense for him to procrastinate. He says that it is just in his inherent nature to procrastinate *"it's just who I am as a person. But being so long that it's actually made me get more efficient at it or get better at it*". John makes the argument that it is actually beneficial for him to procrastinate, and it makes him work better. However, this idea of successful procrastinators has been shown in the literature to be a fallacy. Studies

in the literature make the point that individuals may perform well in spite of procrastination not because of it (Ferrari, 2001).

In fact, John appeared to be engaging in procrastination by taking part in the interview. When asked about upcoming assignments he responded *"Actually, there's one due tomorrow that's worth 50% of my grade."* He explained his plan for finishing the assignment which involved staying up all night to get it done "*So I'm going to be spending all the time today, all the time tomorrow night and morning to get it done for 05:00 P.m. When it has to be submitted".*

John appears to contradict himself at times as to whether he starts his assignments ahead of time or whether he plans out his assignments and makes multiple drafts. At one stage he says that he plans but then says he does it all in one go *"I can build a day around that period of time where I can just go from start to finish."* However later when asked if he makes plans or does it in one go, "*Typically. Usually. If not, what happens is I just do bits of it at a time over the course of several days if I want to."* This suggests that he may have been providing responses that were he deemed socially desirable (i.e. the tendency to present in a way that is more socially acceptable than would be the more truthful presentation; Bergen & Labonté, 2020).

### *3.4.3 Theme 3: The scenarios and strategies that help*

Below are some of the strategies that students identified as being motivating for them to engage in their academic work. Many students made reference to a feeling of security within their friend group that encouraged them to stay engaged with their academic work. In situations where students felt supported by their peers, they reported a greater ability to cope with challenging aspects of the coursework, which they would have otherwise struggled with.

Students also reported the importance of creating the appropriate work environment in which to study. Separating work and study environments can be beneficial for reducing procrastination however this was not always possible due to students' living circumstances.

#### *3.4.3.1 "A good friend group is quite important"*

There was strong sense of agreement in in the interviews that the right peer support is invaluable for staying motivated and resisting the urge to procrastinate. Similarly, there was also agreement that peers can influence procrastination.

Kevin highlights the importance of a friend group in staying focused *"I don't want to feel like a loose cannon."* after noting the sense of "*freedom"* in third level education compared to secondary school (discussed above in Theme 3). For this reason, Kevin makes a point of surrounding himself with classmates that will have a positive influence on his work ethic. *"A good friend group is quite important. If you're not in the right friend group, your work ethics aren't great sometimes".* It is more advantageous to perform the behaviours that member of your group favours. Kevin described how he "*picks carefully"* which friend he chooses to study with as not to become distracted and side-tracked. Kevin also mentions taking part in extracurricular aspects of university life, by playing volleyball.

Similarly, Robert and Liam also highlighted the importance of a friend group. Robert describes how him, and his classmates help each other with aspects of the course. This is important for having someone to study alongside but also to help each other with challenging aspects of the coursework *"If you have somebody from the same course you're studying, it's definitely helpful because, well, first, you can study together, but secondly, you can help each other out with all the hard stuff."*

Liam explains the importance of having peers for support when he is feeling overly anxious. As described in Theme 3, Liam experiences anxiety around failing assignments and

can be overly harsh on himself. Liam spoke about the importance of having friends for support during these times when he is anxious. When asked about what helps to keep him motivated to complete his tasks he responded, *"Talking with friends"*. He believes his friends play a key role in helping him to manage his anxiety *"I'd be a lot more anxious if I didn't have a friend".* This is important for practical reasons such as help with challenging coursework but also for a sense of social support.

He mentions one friend in particular in his course who he finds helpful to talk to. *"Even if it's not about college, say, it's just life. I can talk to her, and it makes me feel a lot better".* The importance of having a support system is well established in the literature. Having social support is particularly important for first year students when they are settling in, as is the case for Kevin, Liam and Robert above (Denovan & Macaskill, 2013).

Liam talks about how he seeks reassurance from his friend. She reassures him if the task is manageable or more challenging by answering *"It's easy enough," or "It could be hard.".* He mentioned how it can be difficult when close friends in the course drop out. "*One of my friends actually dropped out of college and we lost touch and it's been hard"* This is an area that isn't discussed widely in the literature, that students can be at risk when their friends drop out of the course. For the students who are left behind, they may be left vulnerable to disengagement. Getting reassurance from friends is important for Liam. He talks about when he is struggling with an aspect of an assignment his friend can tell him "*If I'm stuck, I'd ask her, "What'd she do for this?"……. "And then she'd take a picture and send it to me, and I'd say, "Oh, that's what you do it".* Liam mentioned how he would compare other students attempts with his work to seek reassurance "*I'd go back to it and look at it again and then compare to what I did, and I'd say, "It's a bit different, but it still works."* Without reassurance from a friend as to whether a task is manageable or difficulty, the student may begin to think

that they are the only ones struggling with the task and may internalise stigma and feelings of inadequacy.

As Kevin explains how students can support each other and encourage others to work to the best of their ability. On the other side of the coin, students can also influence each other to procrastinate, as suggested by Philip below.

Philip admits that he himself tends to be someone who may distract himself and others when he is studying alongside classmates *"Yeah. I can't deny, I'm also a bad influence*" He describes how he cannot help becoming *"easily distracted*" around other people. This appears to relate to Philip's distractibility as described in Theme 1. *"They just wander, their brain just goes into a state of autopilot where they just speak to people just randomly."* Philip describes the impulse he has to tell his friend thoughts that he has which may lead him to spiral away from the task at hand. *"Yeah. You could be sitting there and then suddenly you have a random thought, you remembered something and then you want to show your friend and then you just spiral"* This is reflected in literature on how peers can negatively influence engagement. Frisby et al.'s (2018) study which reported how distracting behaviours has negative influences other student's cognitive load (i.e., the amount of information that working memory is capable of holding at a time).

#### 3.4.3.1.1 Finding the work environment that suits you best

There were various and conflicting opinions on which environment was most suitable for studying such as at home, on campus and at coffee shops. Many students mentioned the importance of a separation between work and study for helping them to stay motivated.

As described in Theme 3, Kevin feels *"overly comfortable"* at home. *"I feel like I can respond. I'll study in a second."*. A number of students highlighted how it can be difficult to

focus in the environment where they usually relax in and to rest and recharge in the same environment that they work in.

Kevin compares college work to having a job and the need for a separation between work and leisure. "*It's like getting a job. You're working when you're working*" and how it is important to have mental boundaries *"you don't want to think about work or school".* For this reason, he found it important to have a separation between home and school. This is reflected in literature on effective remote/ learning working during the pandemic (Copeland et al., 2021).

Similarly, Robert preferred having a separate work and desk area to his area for relaxing. He felt that this separation made him more productive *"When I was studying in {home country}, I was doing everything at home. I had a different room. I had my bedroom, but I had a different room where I studied. That was actually helping me a lot because I separated those two actions, sleeping or enjoying myself from studying".*

However, in Ireland he is forced to do all this work from the one room as he lives in student accommodation *"But when I'm here, I have only one room when I'm here".*

Study environment is also crucial for Jamie. He feels more motivated when he studies on campus, as he feels negative associations with his desk area since remote working during the pandemic.

This was the desk area he used during the time that he had failed his thesis on two occasions. It was also the area that he worked from home during his new job but was forced to end his employment after failing his thesis for the second time (discussed above in theme 1). Jamie mentioned how this created some *"associations"* for him of the time that he was remote working and doing his thesis and subsequently had to end his employment.

He mentioned how he had to remove all the equipment and give it back to the company. *"When I got hired because it was remote working to have all the equipment so when I left, I*

*had to remove that."* He says that some items in his room such as the bag that the company gave him serve as *"reminders"* of this time.

He spoke about the impact of the restrictions and being forced to stay at home and the impact this had on him *"because last year during the lockdown I think that was the quickest year in my life being stuck literally inside my room for weeks and literally not walking up front door."* The literature indicates that these negative associations were not uncommon for students during the remote learning period with higher levels of anxiety, and depressive symptoms reported during this time (Copeland et al., 2021).

This appears to have been the source of some shame and stress for Jamie therefore it is understandable that he has some bad associations with his desk area. For this reason, Jamie makes the point of having a separate area to work that doesn't have these associations *"Since January I've been coming here to campus five days a week. Yeah. Either to try to study or whatever……. I just do not want to avoid home at all costs".*

### 3.5 Discussion

The overall aim of this study was to expand on the aims of study 1, to identify the types of scenarios that make students likely to engage in procrastination and the scenarios that are motivating. In order to gain a range of perspectives on the topic and to expand upon findings from study 1, study 2 explicitly targeted students who were more likely to engage in procrastination. This recruitment strategy was deemed effective in terms of recruiting students more likely to engage in procrastination as a number of the participants admitted that they had assignments or exams in the coming days/ weeks and had further work and study to do for them. One participant described how he had an assignment due the following day and planned to work on it all evening, all night and all day the following day to get it completed in time for

the deadline. Expanding upon the findings of study 1, this study aimed to explicitly explore two topics further;

(i) the scenarios around procrastination related to distraction, (i.e., when a student's attention is pulled away to another task, causing them to delay engaging with the academic task at hand).

(ii) the self-stories that students have around procrastination (i.e., stories that students tend to tell themselves to rationalise procrastination).

Distracting scenarios can be conceptualised as unconscious forms of procrastination whereas self-stories were more deliberate, conscious rationalisations for procrastination.

### *3.5.1 Distracting scenarios*

This study explicitly explored unconscious scenarios involving procrastination whereby a student's attention was pulled away to another task. Responses indicate that procrastination in these scenarios is not always conscious and deliberate as indicated by previous authors (Senécal et al., 2003).

The analysis highlighted a distinction between those who tend to become distracted across the board (i.e., chronic distraction) and then those who become distracted in certain situations. This is in line with Klingsieck's distinction of individuals who are chronic procrastinators or situational procrastinators (2013). In other words, there are many students who can be motivated in one scenario but more likely to procrastinate in another, depending on the context. This is in line with the Contextual Behavioural Science perspective which emphasises the context and function of a given behaviour (Zettle et al., 2016).

Chronic procrastinators, tend to get distracted in most scenarios and can be conceptualised as being a part of their personality. Some students indicated that distraction is a chronic problem that can be conceptualised as a part of their personality. This reflects the conceptualisation of procrastination as a personality trait, as outlined in the 5-factor model of

personality (Schouwenburg & Lay, 1995). Similarly, literature in the area suggests this impulsivity is a personality trait that some individuals display more than others. There is an association with individuals who score high on measures of impulsivity and high rates of procrastination (Steel, 2007).

This study highlighted the stigma attached to this tendency to become distracted, a finding that had been highlighted in the literature (Levrini & Prevatt, 2012). Students reported feeling as if something was wrong with them for struggling to stay focused on the task at hand and subsequently leaving their academic work until the last minute. One student (Jamie) felt such intense shame that he struggled to continue to do his work at the same desk area as he had associated it with uncomfortable emotions. This finding is supported by evidence that shame and stigma can further exacerbate procrastination and may contribute to a vicious cycle (Martinčeková & Enright, 2020). In other words, this can create an association whereby each time Jamie tries to engage with his thesis he is faced with these uncomfortable feelings of shame and stigmatisation.

Instead of criticising a student for laziness or, these students should be supported with the appropriate accommodations needed for engaging meaningfully with their academic work (Rinaldi et al., 2021).

The learning environment should be designed to accommodate the needs of these students who are struggling with distraction. Universal Design Learning can provide a solution to this issue. UDL is a framework that guides the design of teaching methods to meet the needs of the individual (Zeff, 2007). It can help to create a learning environment for people prone to procrastination in situations where they become distracted. Different students will have a preference for different learning and assessment methods depending on individual needs. In order to help support students with this issue of inattention and distraction, the environment must be structured in a way that encourages students to stay focused on the task at hand.

One aspect of UDL is to provide different methods of learning and ways of delivering course content. One practical suggestion offered by a student was to make learning more interactive as opposed to the lecturing style of teaching. During lectures students are expected to sit still and commit their full attention to the content of the lecture for long periods, which can be a struggle for students with attention difficulties. Another suggestion is to introduce movement breaks in between lectures. This is a suggestion from literature on accommodations for ADHD (Barnett, 2017). Therefore, the findings of the study supported the argument in the literature on the overlap in the scenarios in which procrastination occurs and the traits that are common in students with ADHD (Niermann, & Scheres, 2014).

The analysis identified a number of common scenarios for distraction that leads to procrastination, one of which is students receiving notifications from devices and feeling the urge to check them. Other studies have identified how checking notifications and replying to incoming messages can interfere with studying academic material (Sapci et al., 2021). This is particularly relevant as students' phones usage increased during the pandemic (Mack et al., 2021). There are also increasing concern around problematic phone use, and its impact on mental and emotional health (Sapci et al., 2021). Similar findings have been reported in other qualitative studies conducted during the Covid-19 pandemic on the area of remote learning, reporting that distractions in the learning environment were a source of stress for students (Wallace et al., 2021).

Also identified in the analysis, was students tend to go on their smartphones as a "break" from study. This is concerning as students are coming back from their breaks more tired and less rejuvenated. It is also possible that students will have had exposure to content that has evoked some social comparisons (Meier & Johnson, 2022). These findings could inform university staff on the importance of encouraging students to limit distractions in their

environment as well as limiting scrolling during breaks from study. Instead, students should be encouraged to take restful breaks such as getting fresh air, doing an alternative task.

Student should be encouraged to study in environments where distractions can be limited. Relatedly, students who establish routines would be less susceptible to distractions as their environment is primed for productivity (Dietz et al., 2007).

The analysis identified a feature of distracting scenarios whereby the student can end up immersed in another activity for a long period of time (i.e., down a rabbit hole). This can involve scrolling mindlessly on social media. The addictive nature of social media means the student is completely immersed often without realising that several minutes have passed (Alblwi et al., 2021). This can contribute to feelings of shame, which can further aggravate the issue. In the ACT model, this distraction can be conceptualised as the opposite of contact with the present moment (Hayes et al.,2012).

Techniques that people with ADHD use can be using timers to keep them on track of the task and reduce mindlessly immersed in a different activity. This is another example of an environmental change implemented through Universal Design Learning (Zeff, 2007).

### *3.5.2 Self-stories students have for rationalising procrastination*

This study identified some of the kinds of self-stories that students tend to tell themselves when use rationalising their procrastination. Each of these stories supports the conceptualisation of procrastination as a self-regulation strategy (van Eerde & Klingsieck, 2018). In each scenario students are delaying engaging with the task because of the uncomfortable feelings that it.

From the ACT perspective, students are using self-stories to rationalise procrastination, in order to avoid confronting difficult emotions. In other words, the function of these stories is to avoid the uncomfortable feeling associated with the task, known as psychological avoidance (Hayes-Skelton & Eustis, 2020).

In each story, there is some form of avoidance of uncomfortable thoughts associated with engaging in the task. ACT can teach students to accommodate the feelings that arise for them in scenarios where they are inclined to procrastinate. Numerous studies indicate the negative correlation of procrastination and psychological flexibility (Eisenbeck et al., 2019; Glick & Orsillo, 2015).

ACT interventions for procrastination aim to increase psychological flexibility for managing some of uncomfortable feelings that arise for students when they attempt to engage in academic work. Similarly, there is evidence that emotional intelligence training reduces academic procrastination (Hen & Goroshit, 2014; Wan et al., 2014).

An important aspect of managing these self-stories is by encouraging students to bring awareness to them. It is important to be aware of the kinds of thoughts and feelings that arise for students in these situations so that they can create distance from them.

In order to engage in behaviours that are meaningful (i.e., engaging with academic tasks), students must learn to manage the uncomfortable feelings that arise when challenged by academic work. Harris (2008, p. 48) uses the term "unhooking" to describe this process of separating oneself from thoughts, allowing them to be as they are and creating distance from them. Each of these self-stories can be managed by building skills in psychological flexibility (Hayes, 2019; Hayes-Skelton & Eustis, 2020). ACT teaches students to accommodate the feelings that arise in these situations and to manage these self-stories.

Many students made reference to the need for having optimal conditions before they could engage with the task at hand. This was related to the idea of not wanting to be tired or feel too anxious. In reality, students do not need to wait to feel ready "comfortable" before engaging in the task. ACT teaches students to accommodate these feelings. Relatedly, many students described the scenario of feeling as if they would not be able to complete an academic task to the appropriate standard and being debilitated by this thought.

Similarly, the scenario of believing there is no point in engaging in the task as they will likely perform badly anyway. In these scenarios students struggle with encountering challenges associated with coursework and the uncomfortable feelings that arise for them in these situations (i.e., feelings of self-doubt and incompetence). If students are only able to proceed with an academic task on the condition that they will not be challenged, they will not be able to make any progress and growth. A solution to this issue is to encourage students to tolerate the discomfort of being challenged or feeling incompetent.

Relatedly, the scenario of needing to know how to complete the task before it can be started. This is related to students not believing that they are capable of completing the task. The literature indicates that low levels of self-efficacy is related to higher levels of procrastination (Altermatt, 2019; Klassen et al., 2008a). The nature of learning is that it is an uncomfortable and unfamiliar process. By definition, in order to learn and grow in third level education, students will need to encounter and overcome challenges (Shuell, et al., 1990).

Other students described times where they convinced themselves they had seemingly unlimited amount of time to do their work. This is related to delayed discounting. The student has a preference for gaining the more immediate reward (i.e., doing a leisure activity) than the reward that is of greater value and further into the future (Sutcliffe et al., 2018).

This perception of having seemingly unlimited amount of time is related to how students structure their time. The study highlighted how students without routines reported the feeling that they had more time to do their assignments but often left themselves under pressure to get the assignment finished on time as the deadline was approaching. A growing body of literature conducted since the pandemic on working from home supports this idea of establishing boundaries between work and leisure to encourage periods of focus and rest (Allen et al., 2021).

Similarly, many students mentioned using their phones as a "break" during study time however it does not serve the purpose of a break, which is the restorative nature. This finding is supported by the literature, that highlights the importance of restorative breaks during study periods, for example exposure to sunlight and fresh air (Felsten, 2009; Peters & D'Penna, 2020). This ensures that the student can return to the academic task fully re-energised. In many cases students will be more tired after spending time scrolling on their phones. There is also the likelihood that by using social media during breaks students are exposing themselves to social comparisons which has been identified as contributing negatively to their mental health (Reer et al., 2019).

It is likely that students were spending more time on their devices during the lockdown than pre pandemic and therefore had built habits of checking their notifications more frequently. Most of the students interviewed mentioned how their smartphones facilitated their procrastination. There is evidence that screentime increased drastically during the pandemic (Pandya & Lodha, 2021). This finding is supported by studies suggesting immersion is facilitated by the addictive nature of smartphones and social media (Alblwi et al., 2021).

Without a structure and routine, students can easily have the perception that they have more time than they do. For students with routines and habits around completing their academic work, their behaviour is automatic and less reliant on motivation (Dietz et al., 2007). This finding also supports links between lower levels of executive functioning and higher levels of academic procrastination (Rinaldi et al., 2021). Executive functioning relates to the skills needed for planning, organising and self-monitoring (Gioia et al., 2000), all of which are important for engaging in academic work.

### *3.5.3 The interplay between distracting scenarios and self-stories*

Distracting scenarios occur unconsciously and scenarios involving self-stories are conscious rationalisations for delaying engaging with a task. Self-stories are reflective of the

conceptualisation of procrastination as a self-regulation strategy, as outlined in the emotional regulation theory (Blunt & Pychyl, 2000). However, there is an interplay between both of these occurrences of procrastination. Unconscious distraction and voluntary procrastination through self-stories can perpetuate each other in vicious cycles.

This interplay between self-stories and distraction is not something that has been emphasised to date in the literature on academic procrastination. There were many examples of this interplay between distraction and self-stories identified in the findings.

Jamie epitomised the type of procrastination that involves distraction, however he also alluded to the stigma he feels for his inability to stay focused on the task at hand. For Jamie, he was likely confronted with the self-story of "there is something wrong with me" when he attempted to engage with his work, making temptations to become distracted stronger.

Similarly, Philip tended to become distracted in many scenarios, however this had also established into a self-story where he told himself that there was no point in attempting to pay attention in class as he wouldn't be able to pay attention anyway. These examples illustrate the interplay between unconscious processes of distraction and deliberate rationalisations.

### *3.5.4 Peer support and an appropriate learning environment*

As outlined above, students' distractive scenarios and self-stories can feed into each other form vicious cycles of procrastination. Students also referred to scenarios in which they felt motivated to engage in their academic work. These can be conceptualised as virtuous cycles of engagement rather than vicious cycles of procrastination.

The importance of peer support was highlighted throughout interviews. Students found helping each other with coursework to be motivating and engaged with the task at hand. For some students it was important to seek motivation for challenging aspects of the course, which they would have otherwise delayed engaging with. Many students highlighted the importance of peer support for understanding and clarifying difficult concepts related to coursework. This

finding supports the existing literature that a lack of support can predict lower GPA (Altermatt, 2019). This is also reflective of literature in social psychology on the influence of groups (Berkowitz, 1954). In this way, peers can provide a sense of security. Research also indicates that adjustment to higher education involves being a part of the university community (Hoffman et al., 2002), and that extracurricular activities are important for fostering this sense of community (Strayhorn, 2018). Similarly it is well established in the literature that social isolation is a risk factor for academic disengagement (Cohen & Garcia, 2008).

Students highlighted how they can be more motivated in some scenarios than in others. For some students they are more prone to distraction when they are in one environment than another (e.g., checking phone notifications when at home but not when working in a coffee shop). Some students felt more motivated when they had a separation between workspace and study space. This is in keeping with findings from remote learning and working during the pandemic. This can create mental boundaries for the student and prime the area for either productivity or rest (Wang et al., 2021). Other students have established negative associations with their remote working learning environment since working in that environment during remote learning.

Some students also felt negatively influenced by peers at times, such as being distracted by classmates. Frisby et al.'s (2018) provides support for this finding. They reported how distracting behaviours has negative influences other student's cognitive load (i.e., the amount of information that working memory is capable of holding at a time).

### *3.5.5 Conclusion*

Procrastination can be chronic or situational. Learning environments should be designed to encourage engagement and limit distractions. This can be achieved through universal design learning. Self-stories are rationalisations that students have for delaying

engaging with their work. These self-stories can be managed using ACT skills or training in emotional intelligence.

There is an interplay between unconscious forms of procrastination (involving distraction) and deliberate forms of procrastination (involving self-stories). For example, a student can become distracted then establish a self-story to rationalise disengagement. While this interplay can be seen as a vicious cycle of procrastination, there can also be virtuous cycles that motivate students to engage in their academic work. Peer support can motivate students and empower them to overcome challenging aspects of the course. Similarly, the appropriate environment is vital for priming the student for academic productivity.

# Chapter Four

## General Discussion

This research sought to explore experiences of academic procrastination in an Irish undergraduate sample during the Covid-19 pandemic.

While there have been other studies conducted in Ireland on the topic of academic engagement, none has yet explored academic procrastination specifically. A previous study by Moore-Cherry et al., (2015) explored reasons why students drop out of third level education in Ireland, with one of the main findings being 'wrong course choice'. Due to the nature of the methodology used in the study (self-report questionnaires), the findings provided a surface level analysis, lacking in depth and context. The current research explored in more depth students' experiences of academic procrastination through semi structured interviews, providing a richer analysis.

The current research addressed a gap in the literature in terms of qualitative studies on academic procrastination and the role of psychological flexibility, as informed by the principles of Acceptance Commitment Therapy. Previous quantitative studies have shown the link between procrastination and psychological inflexibility (Eisenbeck et al., 2019; Hailikari et al., 2021). There have also been a number of promising interventions for the use of psychological flexibility for reducing academic procrastination (Dionne, 2016; Gagnon et al., 2019). However, the current research was the first to use a qualitative approach informed by ACT, to explore experiences of academic procrastination.

Through qualitative interviews with students, this research aimed to identify the common scenarios that make students likely to procrastinate and the scenarios that are motivating. After initial interviews in study 1, several important scenarios related to procrastination were identified. Further interviews in study 2 sought to expand upon the

findings of study 1 by specifically targeting a sample more likely to engage in procrastination. This was achieved through specifically recruiting from an area on campus when students tend to socialise between lectures, where there was an increased likelihood of recruiting students who tended to procrastinate.

Both sets of interviews provided the basis for a functional analysis of various important scenarios in which academic procrastination commonly occurs; and also, of those scenarios that are most likely to engage and motivate academic engagement. These findings will be discussed below in relation to the literature in the area of academic procrastination, with a view towards providing key recommendations for addressing academic procrastination among undergraduate students both in practice and in policy.

### 4.1 "I hate myself for always doing it" Interrupting the Vicious Cycle of Procrastination

The majority of students made reference to the uncomfortable and difficult feelings that tend to arise for them in situations where they procrastinate. These were feelings of shame, stress, self-hatred and "*general dread*". One student mentioned how the anxiety around academic work can cause her high levels of stress up until the point that her assignment is submitted "*And I find that I get so worked up, so stressed, anxiety, like, I can't sleep the night before*". These responses are consistent with the types of feelings and emotions commonly associated with high levels of procrastination in the literature (Custer, 2018; Flett et al., 2012).

For many students who engage in patterns of procrastination, their shame for procrastinating in the past, contributes to anxiety around completing future aspects of coursework, creating a vicious cycle. To interrupt this vicious cycle of shame and self-judgment, a compassionate approach is needed. Self-compassion refers to self-kindness, common humanity, and mindfulness (Neff, 2003). Compassion Focused Therapy (Gilbert, 2014) is a form of psychotherapy based on self-compassion that aims to reduce shame and self-

judgment, both of which are feelings that commonly show up for students when they delay engaging with their work.

Some studies have highlighted how self-compassion can complement Acceptance and Commitment Therapy (Luoma & Platt, 2015). However, there is a lack of studies that use these approaches in combination for reducing problem behaviours. More specifically, there have not yet been any ACT interventions aimed at reducing procrastination that have explicitly incorporated self-compassion processes. Given that an important component in reducing cycles of procrastination is to reduce self-judgment and shame, future studies could consider the use of both self-compassion and ACT approaches in combination. Luoma & Platt, (2015) make the argument that although self-compassion is an implicit part of ACT, it may need to have more of an explicit focus in order to treat individuals who are prone to shame and self-criticism (i.e., the types of feelings that commonly arise for students in scenarios where they engage in academic procrastination).

### 4.2 Distraction

Some literature conceptualises procrastination as a conscious, deliberate behaviour that is irrational (Senécal et al., 2003). However, others describe the overlap of impulsive personality traits and procrastination and acknowledge that it can be unconscious (Steel et al., 2007). A key finding in the current research was that procrastination can occur in a largely accidental and unintentional manner; in scenarios where the student's attention is somehow distracted by other activities. The current research therefore further supports the idea that procrastination can occur largely unconsciously. In ACT terminology this unconscious, impulsive distraction can be conceptualised as being in opposition to mindful contact with the present moment and so in principle it is therefore in opposition to the psychological flexibility/adaptability to learn challenging academic material effectively (Hayes et al.,2012).

This research also provided support for the distinction of procrastination into chronic procrastinators and situational procrastinators, as described by Klingsieck et al. (2013). This is

in line with the Contextual Behavioural Science perspective of procrastination, which emphasises the importance of contextual factors for influencing behaviour (Zettle et al., 2016).

Findings in the current research highlighted how these scenarios involving inattention and distraction can be stigmatising for students, which has been shown in the literature to further exacerbate procrastination (Martinčeková & Enright, 2020). Instead of criticizing students for becoming distracted, such learners require a compassionate learning environment that automatically holds their attention by design. The Universal Design for Learning approach provides many relevant recommendations for improving the accessibility of academic tasks to cater to the needs of students who become easily distracted. This approach in line with TU Dublin's transform EDU project which calls for teaching resources informed by UDL (Transform EDU, 2021).

In interviews, some students recommended more opportunities for interactive learning in lectures, as opposed to the traditional passive lecture style of learning. Other recommendations could be to incorporate movement breaks in to learning schedules, a common recommendation for individuals with ADHD (Barnett, 2017).

This literature highlights the overlap between ADHD traits and procrastination (Bolden & Fillauer, 2020). Although many students may not fall into the category of a diagnosis of ADHD, the findings of this research highlight a need for similar supports. There has been increased emphasis on neurodiversity and inclusion in Irish policy (Department of Education and Science, 2000). Incorporation of strategies would address these recommendations, by being more inclusive of students with possible traits of ADHD who may or may not have a diagnosis.

A scenario that was identified as being particularly distracting was in relation to smartphone usage. One student commented on the addictive nature of social media when using their phone *"Half an hour was gone, and I was still browsing on Instagram. Then I realized,*

*"Oh, what am I doing?"* When receiving distracting notifications, there is a tendency to become mindlessly immersed in scrolling for long periods of time. This is reflected in literature on the addictive nature of social media (Alblwi et al., 2021). Students reported how they tended to use their phones during their study break which sometimes led them down a rabbit hole of mindless immersion. As an alternative to using social media or technology during study breaks, some studies highlight the benefits of taking restorative study breaks Walking in nature, getting exposure to sunlight and fresh air can all help students return to an academic task fully re-energised (Felsten, 2009; Peters & D'Penna, 2020).

Another scenario involving difficulties with attention specific to remote learning, was in relation to zoom fatigue (Amponsah et al., 2022, p. 3). One student commented that remote learning can be more draining than in person learning "*Just mentally and physically tired. I feel, like, sitting in front on the screen was just taking more energy out of me"* Students had difficulty sustaining attention during online lectures, specifically if they had a number of consecutive lectures in a row. Universal Design Learning could assist in providing a solution to this issue, potentially providing additional breaks during online lectures. Other strategies identified in the literature include turning on cameras to make students visible, using facial and body responses as if communicating face to face, and limiting notifications and multitasking (Peper et al., 2021).

### 4.3 Structuring of Time

A finding that is related to distraction is students' structuring of time and how this tended to result in procrastination. Students that had a structured study routine appeared be less susceptible to distraction as their environment automatically cued and primed focus and engagement as appropriate. By adapting routines and habits to support academic engagement, this limits the reliance on deliberate, effortful forms of motivation, which are a finite resource particularly under stress (Cameron, 2001).

Relatedly, the current research also found that difficulty structuring time also meant that students were not able to prioritise rest and downtime, putting them at risk of academic burnout. Students mentioned being *"exhausted"* and *"drained mentally"* symptoms reflective of academic burnout (Kroska et al., 2017). This is consistent with literature indicating that the impact of the covid-19 restrictions meant that students were more susceptible to feelings of burnout (Burke et al., 2020; Zis et al., 2021).

Issues with structuring of time was heightened during remote learning as students did not have the normal structures imposed by them and were left to self-impose their own schedules. *"When covid hit and then you have all of a sudden, twelve hours of a day to yourself to sit at a desk or a laptop, you don't know what to be doing"*

A lot of studies attribute procrastination to problems in time management (Parpala et al., 2017). In order to manage time efficiently, students must have clarified values and a willingness to tolerate the uncomfortable emotions that arise for them when they attempt to engage in their work. They must also demonstrate the ability to create distance from self-stories that may attempt to pull them away from committed action (García- Zambrano et al., 2019; Törneke, 2021). Therefore, psychological flexibility is needed in order for students to structure their days and manage their time efficiently. The findings of the current research are consistent with arguments made by Hailikari et al (2021), who highlight that how difficulties with time management on its own is not a sufficient explanation for procrastination. They make the point that both psychological flexibility and time management skills should be considered alongside one another, not either or (Hailikari et al 2021).

Timekeeping skills are particularly important for first year students' who may be entering higher education from the leaving certificate program. This may lead to the perception of having an "*unlimited amount*" of time complete assignment compared to the structure of the leaving cert. Although academic procrastination is not directly mentioned in the Hunt report,

(i.e., the 'National Strategy for Higher Education to 2030' report), it makes reference to the importance of timekeeping skills (DES, 2011). The report highlights how first years are a group that need particular support with time management. As discussed above, psychological flexibility goes hand in hand with time management (Hailikari et al., 2021), and developing skills in psychological flexibility would likely contribute to improvements in students' time management and engagement.

Some strategies highlighted in the literature for managing time include the Pomodoro method (Cirillo, 2018) and the use of SMART goals (Small, Measurable, Attainable, Realistic, Time-bound; Gustavson & Miyake, 2017). These techniques also serve to serve a reward and sense of accomplishment, something which was identified as being important to students in interviews.

### 4.4 Self-stories

The current research identified the kinds of self-stories that students tend to tell themselves to rationalise procrastination. Each of these stories reflects psychological avoidance as the student tries to avoid the uncomfortable thoughts and emotions that arise for them when they attempt to engage in an academic task (Dionne, 2016; Gagnon et al., 2016). In an attempt to self soothe and regulate these uncomfortable feelings, students rationalise their procrastination by telling themselves self-stories.

Some students had self-stories that were told to them by society and their communities, which affected their self-worth and contributed their tendency to delay their academic work. The literature indicates that students who are stigmatised by others have additional barriers to overcome in relation to pursuing education and may struggle with academic procrastination (Carey, 2019). The current research identified how some mature students can feel undeserving of an education, contributing to feelings of shame and stigma. One student commented *"The main thing is people saying to me and who wants a degree for your age".* This is echoed in

studies on the experiences of mature students in higher education and the additional barriers they face (HEA, 2021).

In addition, other students from lower socioeconomic backgrounds feared the repercussions of failing exams and the potential of becoming homeless. These internalised beliefs about self-worth and socioeconomic pressures can affect a student's engagement with their academic work (Huang et al., 2018; Krafft et al., 2018). This is closely related to literature on stigma and stereotype threat (Steele & Aronson, 1995) which refers to the risk of students underperforming due to the pressure created by negative stereotypes associated with their demographic group.

Many students made reference to aspects of self-doubt and inferiority when they encountered challenging aspects of coursework. This is consistent with findings in the literature on procrastination and task aversiveness (Blunt & Pychyl, 2000). However, being challenged is by definition a part of the learning progress (Shuell, et al., 1990). In fact, a key aspect in the Hunt Report, outlined how higher education in Ireland should aim to '*create a process of active learning by posing questions, challenging student answers and encouraging (students) to apply the information and concepts in assigned readings to a variety of new situations'* (DEA, 2011 p.53). Therefore, students need to be able to tolerate the uncomfortable feelings of self-doubt that may arise when they are challenged.

Acceptance and Commitment Therapy offers a solution in helping to manage these kinds of self-stories that prevent students from engaging in behaviour that is in line with their values (i.e., completing their academic work; Gagnon et al., 2019). Techniques such as defusion teach students to notice the kinds of feelings that are arising for them in situations where they procrastinate, acknowledge these thoughts, and observe them from a distance (García- Zambrano et al., 2019; Hayes, 2019). Similarly, training in Emotional Intelligence can equip students with skills to have clarity around the thoughts and feelings that may be

preventing them from engaging meaningfully with academic work. It also teaches students how to regulate these emotions (Hen & Goroshit, 2014). The development of lifelong skills is an area that is highlighted in the OECD Skills Strategy framework (OECD, 2019). Learning to regulate uncomfortable emotions associated with engaging in an academic task and persist in moving in the direction of goals is an important lifelong skill for students to develop.

The current research identified that feelings of intimidation related academic work can be exacerbated by conversations on class group chats such as WhatsApp or Facebook Messenger. The conversations on these group chats can involve information about assignments and other aspects of the course content. However, it can sometimes be misleading for students and spread misinformation. This can create intimidation for students and contribute to a desire to delay engaging with the task. This scenario of intimidation as a result of conversations on the class group chats is an area that has not been highlighted in the relevant literature, or in policy on student engagement. One student commented how she feels incompetent when she reads messages on the group chat and perceives her classmates can complete challenging components of the coursework and she cannot *"Oh, I feel so stupid,' that's what's going through my brain is that I'm just like, how come these people could get it and I couldn't get it".* A possible solution may be to appoint a student to moderate the group chat to prevent against the spread of misinformation related to assignments and coursework.

### 4.5 Interplay between distraction and self-stories

This research identified the conscious, deliberate forms of procrastination (i.e., self-stories to rationalise procrastination) and procrastination that is unconscious and caused by distraction (i.e., attention being pulled away to another task/ stimulus). However, this research also identified how there can be an interplay between these two forms of conscious and unconscious procrastination.

In some circumstances, students may become distracted, find themselves immersed in a different activity but then use self-stories to rationalise their postponement of the task. In

other situations, a student may have genuine difficulty with attention but also tell themselves the self-story that there is no point trying to pay attention in class as it is pointless, thereby disengaging. These examples illustrate the interplay between self-stories for rationalising delays and delays as a result of distraction. This perspective has not been considered in existing literature on academic procrastination.

The majority of studies on procrastination consider factors influencing procrastination (which can be conceptualised as relating to intentional deliberate rationalisations for delaying a task) such as self-efficacy (Klassen et al., 2008b), characteristics of the task (Blunt & Pychyl, 2000) or fear of failure (Zhang et al., 2018). However, other studies focus on distraction and impulsive aspects of procrastination separately (Bolden & Fillauer, 2020; Rozental & Carlbring, 2014). In other words, there is a lack of research on how these two forms of procrastination overlap (e.g. how self-stories can be used to rationalise instances of distractive procrastination). Future research could consider this interplay between these two aspects of procrastination (i.e., conscious and unconscious).

### 4.6 The scenarios that help

A number of scenarios related to motivation and engagement were identified in both studies. While many of the scenarios above relate to *vicious* cycles of procrastination, the above findings refer to *virtuous* cycles of engagement.

In study 1 of the current research the importance of social connectedness and a sense of belonging was highlighted as a key protective factor against procrastination. This finding is well supported in the literature, which identifies isolation as a risk factor for disengagement (Cohen & Garcia, 2008). This was particularly relevant during remote learning when students were removed from the typical opportunities for social connection, a finding that was consistent with studies conducted during the Covid-19 pandemic (Morris et al., 2021). However, some students highlighted how they felt particularly supported during remote learning as the

university put in place additional measures to foster a sense of connection such as the use of discord group chats for informal socialising. Perhaps these measures can be extended into the future to continue to foster this social connectedness among students.

The findings from study 2 of this research developed upon some of these issues on social connectedness, in relation to the theme *the importance of a good friend group.* A good friend group is helpful in relation to classmates helping each other with difficult parts of coursework. More specifically, peer support can reassure a student whose feelings of self-doubt or self-stories around their academic ability are causing them to delay engaging with academic tasks. In this way, reassurance can help students to regulate uncomfortable emotions associated with engaging in a task, which they may have otherwise avoided (Andreassen et al., 2017). Similarly, peer support is important for helping students to maintain a good "*work ethic*", a finding that is supported by research on the social influence of groups (i.e. it is more advantageous to perform behaviours that members of your group favours Berkowitz, 1954).

The peer support programme in TU Dublin (Blanchardstown) is one such initiative in the university that helps to support students and foster this sense of support and community. In the current research, some student reported that although they found the peer support programme helpful, it sometimes clashed with their schedule. Other students felt that it would be more helpful throughout the latter half of the semester, when they are more settled into the academic year, as opposed to the beginning.

Along similar lines to peer support for maintaining a good work ethic, was the importance of *social accountability*. This can come from peers, in relation to working alongside classmates. However aside from peers and family members, some students who were receiving learning supports felt accountability from supports such as the National Learning Network. This is related to literature on social pliance (Harte & Barnes-Holmes, 2022). For some students the social consequences of staying focused on the task (social approval from peers)

can be very motivating, more so than the natural consequences, such as the sense of accomplishment from finishing a component of an essay (Harte & Barnes-Holmes, 2022).

## 4.7 Limitations and Future Research

A limitation in study 1 of this research was the potential for self-selection bias in its recruitment of interviewees. Many participants who participated in the study appeared to be relatively well motivated rather than habitual procrastinators per se. This limitation was addressed in study 2 by specifically targeting students more likely to engage in procrastination in the second sample. Future studies could use a self-report measure of procrastination as a screener tool to ensure a range of procrastinators and non-procrastinators were included in the sample.

Further limitations of this research are related to its qualitative nature. It is important to note that due to the nature of qualitative analysis, the generalizability of its findings is limited. The interview guide(s) were also limited in some respects. While the interview guide did explore some aspects of psychological flexibility, such as experiential avoidance/avoidance, cognitive fusion, values, and committed action, they did not explicitly explore the two other domains of the ACT hexaflex (contact with the present moment and self as context; Hayes, 2006). Future studies could incorporate all domains of the hexaflex into studies on experiences of academic procrastination. As is sometimes the case with research involving interviews, there can be a risk of social desirability in the responses that participants provide (Bergen & Labonté, 2020). However, this was the nature of the chosen methodology (in depth interviews) and was necessary for exploring student's experiences of procrastination. Another limitation was that the sample in study 2 (that specifically targeted those likely to engage in procrastination) included all males. However, in study 1 more than half of the participants were female (7 female: 5 male).

Future research could consider how self-compassion could be better incorporated into the ACT model, particularly with individuals who are prone to shame and self-criticism, as is the case in academic procrastination. Future research could explore the interplay between self-stories of procrastination (i.e., the rationalisations students make for delaying engaging with their work) and unconscious distraction caused by distraction.

The population of undergraduate students who took part in the current research were all studying at Technological University Dublin, Blanchardstown campus. This university campus has been identified as having one of the lowest deprivation index scores of all higher education institutes in the country, indicating high levels of social deprivation (HEA, 2022). Future studies could compare the findings from the current research with other students from higher SES communities (potentially those from a more affluent university campus), to identify any differences in the common scenarios within which students are likely to procrastinate. There are many studies that report higher levels of impulsivity within lower SES groups (e.g., Sheffer et al., 2012), explained by how chronic stress and adversity may narrow an individuals' perspective (Lovallo, 2013). These findings suggests that students from lower SES universities may be more likely to have impulsive, distracted forms of procrastination than students from higher SES universities.

Future research could also consider social accountability and the role of pliance in motivations for engaging in academic work as well as any possible gender differences that may exist. Lastly, the findings of the current research can provide important insight into the design of domain specific measures of psychological flexibility for academic procrastination. These measures are important for identifying which students are most at need of supports.

## 4.8 Conclusion

The current research used a qualitative approach to explore experiences of procrastination, specifically focused on gaining experiences of all demographics of students in

the population. This included mature students and non-mature students, students with physical disabilities and learning disabilities, students who were neurodiverse and students from different races and ethnic backgrounds.

The current research highlighted the distinction between deliberately rationalized forms of academic procrastination (i.e., stories used to rationalise delaying academic work) and more impulsive forms of procrastination involving distraction.

The self-stories that student use for rationalising procrastination are an attempt to avoid dealing with uncomfortable thoughts and feelings associated with the task. Psychological flexibility can help students to create distance from these thoughts through ACT techniques and training in emotional intelligence. This study also suggests that incorporating self-compassion into the ACT model would be helpful in managing the self-judgement and shame that often perpetuates vicious cycles of procrastination.

Lastly, these findings highlight the importance of destigmatising distractive procrastination and instead looking to how learning environments can be designed to support students prone to distraction, through the principles of Universal Design for Learning (Zeff, 2007).

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# Appendix

## Appendix 1

**Pre-Interview Information Sheet**

**Project Aim:** To understand Irish undergraduate students' experiences of managing procrastination related to university life.
**Overview:** This research will involve being interviewed on your experiences of managing procrastination as an undergraduate student. You are also free to withdraw your participation at any time during your involvement in this interview without explanation.
**Who can take part?** Anyone over the age of 18 who is an undergraduate student in TU Dublin Blanchardstown.
**Time to Complete:** approximately 50 minutes.
**Information for participants:**

- If you have any concerns about participation you may refuse to participate or withdraw at any stage.
- All data from the study will be treated confidentially and anonymously in line with GDPR guidelines. None of your data will be identified by name at any stage of the data analysis or in the final report. All data collected will be used only for the purposes that consent is given.
- At the conclusion of participation, any questions or concerns you have regarding the research will be fully addressed.
- You may withdraw your data from this study up to 6 months after taking part, after which identifiable data will be deleted.
- De-identified data (i.e., data from which all personally identifiable information has been removed) will be deleted after a period of 5 years.
- In the unlikely event that you experience distress during the study, you agree to be referred by the researcher, via email, to the TU Dublin counselling service using your student email address.
- For further information or questions, please contact: Gráinne Carthy B00130979@mytudublin.ie or her academic supervisor Dr. Nigel Vahey nigel.vahey@tudublin.ie

## Appendix 2

## Topic Guide for Study 1

| Questions/Prompts | Topics |
|---|---|
| What made you want to go to college?<br><br>What inspired you?<br><br>How are your exams going/ how did they go? | Welcoming/building rapport<br><br>Current exam period |
| Can you tell me about your experience of procrastinating academic work?<br>-What were some of the thoughts and feelings that arose for you when you had that feeling of wanting to avoid your work?<br><br>Do you think there might have been some element of procrastination in volunteering to do this interview with me?<br><br>Are there certain scenarios when you are more likely to engage in procrastination? | Procrastination |
| Vignette option: Imagine you are seated at your desk about to start some college work. What kind of distractions (if any) might cause you to disengage from your work?<br><br>Vignette option: Think about a time where you put off an assignment until the last minute. As a result, you were rushing to get the assignment finished on time for the deadline. Can you tell me about this experience?<br><br>Vignette option: Think of a time when you started an assignment ahead of time. You started it in advance of the deadline and gave | Vignettes: Used to encourage students to talk about topics that they are comfortable with. (Vignettes are adapted from a similar study on student experiences by Denovan & Macaskill (2013) using Interpretative Phenomenological Analysis)<br><br>Impulsivity/Distractions<br><br>An experience of procrastination<br><br>An experience of being motivated |

| | |
|---|---|
| yourself enough time to get it finished. Can you tell me about this experience?<br><br>Procrastinate more with certain lecturers? | |
| What is going on for you in your mind in these scenarios?<br><br>What kind of self- talk is going on for you in situations where you procrastinate i.e., do you ever tell yourself you cannot start your work because of X reason/ or "I'll do it tomorrow"? | Self -talk during procrastination<br><br>Rule governed behaviour<br><br>Self -compassion and procrastination |
| Talk me through what procrastination would have looked like before Covid-19?<br><br>-What does it look like now?<br><br>How does remote learning affect procrastination, for you? | Comparing Covid-19 restrictions and now<br><br>Remote learning<br><br>Disruptions of people's routines |
| Do you turn your camera and microphone on in class?<br><br>-Why/why not? | Participation in class<br><br>Connection with peers |
| Do you ever feel that you're working to make something so high quality that it prevents you from completing your work on time? | Perfectionism and procrastination |
| Can you tell me about your set up for (i.e., workspace) for doing your college work?<br><br>-Do you do your work on a phone/ laptop?<br>-Do you have a laptop/desk?<br><br>How do you think that feeds into procrastination?<br><br>-Are you aware of the laptop scheme? | Workspace/Technology poverty |
| In the second part of this study in Autumn we are planning to ask students to self-reflect on situations that would make students want to procrastinate.<br><br>What is the type of situation in which you procrastinate the most?<br>-Can you describe it?<br>-What are the sensations in your head and heart when this happens? | Feasibility of procrastination induction procedure:<br><br>Explanation of phase 2 (filling out a questionnaire while being asked to reflect on scenarios intended to simulate procrastination)<br><br>Do you think that these are scenarios would make a person likely to engage in procrastinate? |

| | |
|---|---|
| Do you think the following examples are scenarios that procrastination is likely to occur?<br><br>Examples<br>-You have missed a few lecturers and feel that you are behind in a particular module. You have been given a task to do by the lecturer.<br><br>-You feel you do not have enough knowledge in the area and are overwhelmed by the task.<br><br>-You have been given an assignment to do. The objective of the assignment is unclear, and you do not know what the lecturer wants you to write about. | (Feeling lost and overwhelmed by a task as a reason for procrastination) |
| Have there been any supports that you have availed of for help with procrastination?<br><br>What has stopped you from engaging with these supports?<br><br>-Were you involved with the peer support programme?<br>-Have you taken part in any of the Mindfulness and Emotional Intelligence workshops? | Helpful supports on campus<br>e.g., the National Learning Network/ Peer Support Programme<br><br>Reasons for not engaging with supports |
| | Debrief/ information sheet for accessing supports/advice on strategies for managing procrastination (informed by the research literature) |

## Appendix 3

### Topic Guide for Study 2

| Topic | In literature |
|---|---|
| Values | Whether intrinsic or extrinsic (Deci & Ryan, 2000)<br><br>Whether the student has clarity in their values |
| Procrastination | Experiences of delaying engaging in academic work |
| Background factors affecting their engagement with college work | Home/ family/ responsibilities/ part time jobs/ Susi grant/ |
| Positive vs negative reinforcement<br>-Difference between being distracted or avoiding the task because of uncomfortable feelings<br>Positive reinforcement (scenario A) = situations where the student is being pulled away, or distracted from their academic work)<br>Negative reinforcement (scenario B)<br>= student is avoiding uncomfortable feelings associated with an academic task | Distracting scenarios |
| The conceptualisation of self | Rigid conceptualisations of self which are problematic and inflexible to change (Murthy et al. 2021) |
| Self-efficacy<br><br>Beliefs that students have about themselves<br><br>Strategies for dealing with these uncomfortable thoughts and feelings | Students who believe they can do well are more likely to be motivated to self-regulate and persist.<br><br>ACT techniques of defusion. CBT techniques of challenging the thoughts. |
| The characteristics of a task – task aversiveness | When a task is perceived to be boring, unpleasant, and/or uninteresting (so-called task aversiveness), this strongly predicts students' procrastination (Blunt and Pychyl, 2000; Steel, 2007). |
| Now vs then | A comparison between time during lockdown in June 2021 and the lifting of restrictions now in March 2022 |
| Online learning | Impacts of the pandemic: Certain aspects of online learning making the student more likely to engage in procrastination Morris et al., 2021) |
| Self-regulation | Students waiting until they feel good before starting an assignment (Ferrari, 2001) |

| | |
|---|---|
| | Avoidance of uncomfortable thoughts and feelings (Scent and Boes, 2014). |
| Self-compassion | Closely related to ACT.<br><br>In Sirios 2014c: how self-compassion was shown to mediate the relationship between trait procrastination and stress. |

## Appendix 4

## Post interview Information Sheet for Accessing Supports

**The study has raised personal issues that I am not comfortable discussing with the researcher now, what should I do?**
If you feel you have been adversely affected by taking part in this study, you are advised to seek help from your GP or you may wish to contact your university student support services.

### Supports in TU Dublin (Blanchardstown)

These services in Blanchardstown campus are listed below. They are available throughout the semester for all students. They provide face to face and remote services to all students.

- **Student Counselling Service** Please e-mail our Student Counsellor at clodagh.nighallachoir@tudublin.ie with your contact details to organize a remote appointment via Microsoft Teams or telephone.
- **The National Learning Network (NLN) Educational Support Service** Email studentsupport@nln.ie to organise a meeting
- You can also link with the Student Services or your course tutor and or course coordinator.

### External supports (outside TU Dublin)

**SAMARITANS:**
Free 24hr Helpline: 116 123
Email: jo@samaritans.org
Website: www.samaritans.org

**AWARE (depression):**
Helpline: 1800 80 48 48
Email: supportmail@aware.ie
Website: www.aware.ie

**PIETA HOUSE** – Centre for Prevention of Suicide & Self-Injury
Providing professional one to one counselling for those self-harming, feeling suicidal or suffering effects of a suicide event.
Free 24hr Helpline: 1 800 247 247
Email: mary@pieta.ie
Website: www.pieta.ie

**JIGSAW: D15**
Tel: 01 890 5810
Email: dublin15@jigsaw.ie
Website: www.jigsaw.ie

**SpunOut.ie** youth information website created by young people for young people
**ReachOut.com** online youth mental health service
**Niteline** (9pm-2.30am term time) 1800 793 793