Exploring dishonest behavior from the students' perspective: Approaches to complementary exercises in undergraduate's general physics course

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Article Info

Abstract

This study aimed to investigate the perspectives of undergraduate students regarding dishonest behavior when engaging in complementary exercises. It explored the causes, factors, and methods associated with such behavior and seeks to identify preventive and remedial measures to address this issue within undergraduate education. The qualitative research was conducted through in-depth interviews with eight students enrolled in the general physics II course during the first semester of the academic year 2020. These students provided insights into their experiences with displaying unfaithful behavior in educational settings. Prior to data collection, the research instrument, specifically the interview form, underwent a meticulous pilot testing phase, during which its questions were refined and enhanced to ensure clarity and relevance. The findings of the inductive content analysis revealed the following: (1) Dishonest behavior, such as copying and plagiarism, was prevalent among the participants; (2) Causes and factors contributing to dishonest behavior stemmed from personal motivations, external expectations, social pressures, economic factors, and perceived benefits; and (3) Prevention and mitigation strategies could be implemented through instructor adjustments, lesson content modifications, online teaching system improvements, and positive motivational approaches. The explanation for dishonest behavior in complementary exercises draws upon the theory of planned behavior, as well as additional theories such as social learning theory, self-control theory, and socialization theory. These theories not only shed light on the underlying causes and contributing factors of dishonest behavior but also offer insights into preventive and corrective measures for addressing this issue in undergraduate education.

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Introduction

Honesty, as the cornerstone of virtue, holds paramount importance. The significance of instilling honesty in children becomes apparent as it shapes their journey towards becoming morally upright adults. Moreover, honesty plays a pivotal role in fostering sustainable and stable national progress, aligning with the objectives set forth in the 13th National Economic and Social Development Plan. This plan emphasizes the cultivation of virtuous, intelligent, and knowledgeable individuals who will shape the future of the nation. Equipped with honesty and self-reliance, Thai youth are empowered for continuous self-learning, empowering them to contribute effectively.

Several researchers have studied dishonest behavior in higher education. According to Kornpetpanee's investigation in 2006, a striking 97 percent of the participants from a state university confessed to engaging in academically dishonest practices, including copying practice papers and cheating during examinations. Surprisingly, students tend to perceive dishonesty as a victimless offense and regard it as inconsequential. This finding is consistent with the research conducted by Wichiranon in 2010, which revealed a concerning lack of morality and honesty among undergraduate students. Shockingly high percentages of students were found to partake in dishonest behaviors during exercises (87.40%), exams (75.60%), reporting (75.60%), and data generation (70.20%).

Based on the aforementioned research studies, it becomes evident that persistent educational dishonesty poses a significant obstacle to students' effective learning and comprehension of course material, which is the primary goal of their education. As a researcher teaching general physics at a university, where this subject serves as the foundation for advanced topics, we assigned exercises to enhance students' knowledge and allow them to earn points. Motivated by the opportunity for formative self-assessment and the development of indirect self-reliance, the exercises followed a self-study and point-earning system, enabling students to repeat them an unlimited number of times throughout the semester. Regrettably, instances of academic dishonesty were observed among certain students who completed the exercises rapidly and attained unusually high scores. Consequently, a noticeable discrepancy emerged between their overall knowledge during summative exams and the formative exercises. This raised concerns and emphasized the urgency of identifying the root causes of such behavior and developing strategies to prevent educational dishonesty.

To gain insight into the underlying causes of dishonest behavior, it is valuable to explore the definitions of honesty and educational dishonesty. Honesty is a behavioral expression rooted in truth, correctness, and integrity, encompassing appropriate conduct in physical, verbal, and mental aspects towards oneself and others. Conversely, educational dishonesty can be defined as any inappropriate behavior or action, whether spoken or enacted, that deviates from the principles of learning, knowledge, thoughts, feelings, and intentions. Examples of such behaviors include lying, cheating, copying homework or exercise reports, exam theft, sharing testimonials with friends, having someone else copy an exam, and utilizing electronic media, including engaging in exam outsourcing.

A number of psychologists and social scientists have developed theories that offer potential explanation for educational dishonesty. First, the theory of planned behavior, proposed by Ajzen, asserts that an individual's behavior is influenced by their intentions or the intention to engage in a specific behavior. It suggests that the more effort a person puts into a behavior, the greater the likelihood of displaying that behavior (Ajzen, 2015). In the context of educational dishonesty, this theory implies that instances of inappropriate behavior in education stem from learners' intentions to engage in such behavior. Another theory that sheds light on educational dishonesty is the social learning theory by Bandura. According to Bandura, learning occurs through continuous interactions among individuals, their environment, and their behavior. This theory emphasizes that social learning accounts for both constructive and inappropriate behavior (Bandura, 1986). Numerous studies had explored the phenomenon of academic dishonesty, yet the application of Bandura's (1986) social learning theory in this context remained underutilized. Understanding academic dishonesty through the lens of social learning theory is important for two primary reasons. Firstly, the theory emphasizes the role of faculty members in shaping student behavior in academic settings, highlighting how students may emulate their peers' conduct within the classroom environment. This aspect aligns with a core principle of Bandura's (1986) theory, underscoring the significance of observational learning. Secondly, in the context of increasing globalization within higher education, it becomes increasingly relevant to understand how the principles of social learning can be adapted and applied to mitigate instances of academic dishonesty. This understanding is crucial, as suggested by Hendy et al. (2021), for developing strategies that effectively address and reduce academic cheating. Therefore, it can be inferred that dishonesty, being a behavior that deviates from social norms, is influenced by the learning experiences of individuals.

Furthermore, the socialization theory, as proposed by Grusec and Hastings, highlights that individuals are inherently social beings who exist within communities and societies governed by rules and cultural norms. These rules and norms are transmitted through teaching,

learning, and socialization processes, both directly and indirectly, among group members. This process allows individuals to acquire and apply the behavioral rules, values, and norms established by their respective groups or societies, particularly in their interpersonal relationships. Key agents of socialization include family, friends, schools, professional groups, media, and religion (Grusec & Hastings, 2014). According to the socialization theory, academic excellence may be one of the values cultivated within students. For example, Bader et al. (2016) conducted a study focusing on the prevalence of academic dishonesty among students within the College of Basic Education in Kuwait. Their findings revealed a notable disparity in the frequency of dishonest academic behaviors between genders, with male students exhibiting a higher propensity for such practices compared to their female counterparts. This observed gender-based difference in academic dishonesty may be theoretically contextualized within the framework of sex-role socialization theory.

Additionally, the self-control theory proposed by Gottfredson and Hirschi examines how self-control influences an individual's likelihood of engaging in criminal activities. Individuals with low self-control exhibit a higher propensity for involvement in illicit behaviors. They are easily stimulated, inclined towards risk-taking, emotionally unstable, lack a clear moral standpoint, display intolerance, exhibit self-centeredness, and are often influenced by negative parental upbringing. Moreover, they tend to associate with delinquent peers who encourage inappropriate behavior. Their limited self-control stems from prioritizing immediate self-interest without considering the long-term consequences (Gottfredson & Hirschi, 1990). Hence, learners' dishonesty may arise from a lack of self-control and a focus on self-interest, such as seeking additional scores with minimal effort to achieve the desired grade for social acceptance.

Among these theories, numerous research studies have demonstrated the applicability of the planned behavior theory in explaining observed behaviors, while not extensively with dishonest behavior. Therefore, it would serve as a valuable framework to elucidate dishonest behavior among students in the field of education. According to this theory, an individual's behavioral intention to engage in or abstain from a particular behavior determines their actual behavior. Accurately measuring the intention or willingness to engage in appropriate behavior can effectively predict behavior outcomes. The theory posits that the interplay between three factors—attitude toward behavior, subjective norm, and perceived behavior control—indirectly influences behavior through the mediating variable of intention (Ajzen, 2014). The work of Wichiranont (2010) revealed

a correlation between the conformity to group attitudes on academic integrity and perceived deficiencies in academic integrity, indicating their influence on behavior. In a more recent study, Tongsamsi and Promgird (2017) explored the causal relationship between attitudes and honest behavior, discovering that negative attitudes have an impact on dishonest behavior. These concepts can serve as a foundation for investigating the causes, factors, and associated methods related to dishonest behavior within the context of higher education course platforms.

The General Physics II course, with a substantial enrollment of over 100 students, holds a prominent position in the science and technology undergraduate curriculum. The course, with its focus on Electricity and Magnetism, Optics, and Modern Physics, equips students with the theoretical knowledge and analytical skills necessary for a broad spectrum of scientific and engineering fields. It provides an ideal platform to delve into the integrity of students. Our approach focused on imparting a solid foundation in physics and ensuring comprehensive mastery of the course content. To achieve this, we designed personalized complementary exercises using the Moodle learning management system (LMS), aligning them with the national curriculum's learning objectives and the course's specific targets. Our intention was to foster self-study and cultivate self-reliance among our students. Hence, we granted them unlimited attempts to complete these exercises through the LMS platform, which featured an automated checking system.

Regrettably, during a specific period, particularly close to the submission deadline, we noticed a significant number of students achieving perfect or unusually high scores on the exercises, which appeared inconsistent with their performance in the final exam. This observation raised concerns and prompted us to question the integrity of their actions. Consequently, our aim is to explore the perspectives of students regarding dishonest behavior in working on complementary exercises. In the context of academic setting, the developmental stage of 18–21 years, would be a formative period for engaging with concepts of honesty and dishonesty. Psychological growth, including identity formation and social relationship building, alongside cognitive advancements, such as moral reasoning and self-regulation, would play a significant role in shaping ethical behaviors in educational contexts. According to Keith (2018), academic dishonesty is becoming a prevalent and concerning issue in higher education. As a result, it is imperative for faculty members and instructors to meticulously examine the underlying factors that lead to student misconduct and to adapt their pedagogical strategies in response. Therefore, we seek to investigate the underlying causes and factors contributing to such behavior, as well as the associated methods,

from the students' viewpoint. Our ultimate goal is to develop preventive measures and implement remedial actions. The outcomes of this research endeavor will play a pivotal role in identifying effective solutions and formulating policies that promote honest behavior among students. Such efforts are vital for cultivating a culture of integrity and honesty in future educational endeavors.
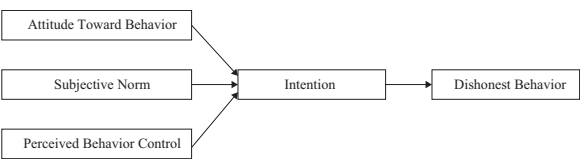
Research conceptual framework

Figure 1 Research conceptual framework based on the theory of planned behavior

Methodology

This qualitative study employed in-depth interviews as the primary research method. The interviews were designed to delve into the educational perspectives surrounding dishonest behavior, covering aspects such as its definition, underlying causes and factors, personal experiences of engaging in such behavior, and potential strategies for its prevention. The study included a group of eight students who were enrolled in the general physics course 2 during the first semester of the academic year 2020. The selection of participants was purposive, considering their representation across different academic performance groups (ranging from A to F) and their willingness to contribute information. This research was undertaken during the COVID-19 pandemic, a period characterized by rapid transitions between remote and in-person instruction, which significantly complicated the recruitment process. Initially, attempts to engage potential participants through recruitment

emails were met with limited responsiveness. Despite these challenges, persistence enabled the research team to establish contact with students majoring in mathematics, facilitated by an intermediary lecturer who was actively teaching the target cohort during the semester. Similarly, students specializing in chemistry were successfully approached during their laboratory sessions, leveraging the physical presence required for these classes. Prior to data collection of the students in that semester, the interview instrument was subjected to a pilot test gathering data from similar numbers of students who were enrolled in the General Physics II course during the summer semester of the academic year 2020. The instrument was then refined and enhanced the questions, ensuring their effectiveness in eliciting meaningful insights. The semi-finalized interview protocol comprised eight questions. Furthermore, the questions were finalized with the suggestions from the Kasetsart University Research Ethics Committee, before the study received ethical clearance from them, under the certification number COA63/058, underscoring its adherence to established ethical standards in academic research.

Each in-depth interview lasted approximately 30 minutes, and the researcher conducted them personally. Following the interviews, three researchers independently analyzed the interview data using an inductive content analysis approach. This involved extracting, interpreting, and cross-checking relevant information from the interviews. The researchers then categorized and subcategorized the information based on the Planned Behavior Theory. The findings of the analysis were presented in a descriptive study format, following the guidelines outlined by Elo and Kyngäs (2008).

Results

Part 1 General Information of the Informants

The study included a total of eight participants, evenly distributed between four females and four males. The summarized data are presented in Table 1.

Table 1 General information of the informants

Pseudonym	Field	Overall average grades (GPAX)	Academic performance of general physics II course	Complementary exercise score (full score 17.50)
Mr. A1	Mathematics	2.80	B	16.17
Mr. A2	Mathematics	3.02	C+	14.17
Mr. A3	Mathematics	2.53	C+	16.83
Mr. A4	Mathematics	3.59	A	16.83
Ms. A5	Chemistry	2.66	C+	16.33
Ms. A6	Chemistry	2.04	C	13.00
Ms. A7	Chemistry	3.49	B	16.33
Ms. A8	Chemistry	2.12	F	13.17

Part 2 Exploring the Perspectives of Undergraduate Students on Dishonest Behavior in Completing Complementary Exercises

Based on the testimony provided by the informants, we have categorized the perspectives of students on dishonest behavior in education into six aspects, which are outlined as follows:

1. Defining dishonest behavior in education

The term "dishonest behavior in education" has multiple interpretations, but this study specifically aimed to understand its meaning through the standpoint of students enrolled in the general physics course 2 during the first semester of the academic year 2020. The researcher sought insights from the students' firsthand experiences, thoughts, and beliefs within the context of higher education. According to the students, "dishonest behavior in education" primarily encompasses acts of cheating, corruption, non-compliance with established rules, and actions that contribute to injustice.

2. Defining dishonest behavior in completing complementary exercise

The term "complementary exercise" in this context pertains to an online exercise specifically tailored for the general physics 2 course. Its purpose is to offer students a platform to consolidate their understanding of the subject matter, bridging the gap between the high school level and the first-year university level. The exercise comprises a comprehensive set of questions, encompassing 12 chapters from both levels. Both components of the exercises have a common objective: to identify and address any learning deficiencies that students may have independently. The exercise scores are designed to serve as incentives rather than strict requirements. The researcher provides students with the freedom to complete the exercises at their own pace within a single semester, ensuring that this approach does not impose undue pressure. The researcher expects students to seek assistance when needed, such as requesting content explanations through various learning channels or engaging in actions that facilitate their understanding of areas that require improvement.

When considering the notion of "dishonest behavior in doing complementary exercises" within the framework of universities and Thai society, it becomes evident that a significant number of students regard the act of copying exercises as a prominent manifestation of dishonest conduct. These students recognize that dishonesty encompasses actions such as the sharing of answers or the solicitation of unauthorized assistance, particularly given the existence of explicit scoring criteria and the subsequent repercussions on academic performance.

Furthermore, this type of behavior introduces an element of inequality within the student community, as those who partake in dishonest practices may attain higher grades or academic achievements at the expense of their upright peers.

3. Approaches to completing complementary exercises: insights from students' perspectives

The practical methods employed by students to tackle these exercises provide valuable insights into their experiences and approaches. The following are the identified methods:

• Seeking help from others: When encountering difficulties in specific parts of the exercises, students frequently turn to their friends or individuals with expertise for assistance. They seek explanations with the goal of comprehending the problem and finding a solution. In certain instances, they may even request to copy the answer without engaging in critical thinking or developing their own problem-solving approach.

• Utilizing instant messaging platforms: Students make use of platforms such as Line to establish group discussions, enabling them to share information and actively participate by exchanging images, screen captures, and providing answers to exercises.

• Self-Study through internet searches: Some students prefer independent study by conducting online searches. Initially, they may consult books for answers, but if they are unable to find the desired solution, they resort to searching the internet. It is common for students to discover similar problem-solving methods with adjusted input parameters in order to obtain the final answer.

The methods employed by students to complete complementary exercises involve seeking assistance from others, engaging in live group discussions to share information, and pursuing self-study through internet searches. These diverse approaches highlight the students' resourcefulness and adaptability in utilizing various resources to enhance their understanding and successfully complete the exercises. However, these methods also raise concerns regarding the students' actual learning and mastery of the course content.

4. Benefits of complementary exercise: insights from students' perspectives

Students consider the completion of complementary exercises to be advantageous for the subsequent reasons:

• Editable answers: Students view this format as an opportunity to revise their answers until achieving their desired score. Unlike in other subjects where incorrect responses result in point deductions, they can modify and enhance their answers in these exercises.

• Facilitation of knowledge gap identification and filling: These exercises promote critical thinking and

problem-solving practice, enabling students to review their knowledge before exams.

• Convenient access to online exercises: The accessibility of these exercises online is highly valued by students. They have the flexibility to complete the exercises at their own pace and from any location with an internet connection, which enhances the adaptability of their study routine.

Students perceive several benefits when engaging in complementary exercises, including the ability to edit their answers, the opportunity to identify and address knowledge gaps, and the convenience of online access. These factors significantly contribute to the overall positive perception of these exercises among students.

5. Enhancement and advancement opportunities for complementary exercises: insights from students' perspectives

Based on the insights gathered from the interviewed students, the following areas for improvement and development of the complementary exercise have been identified:

• Quantity of exercises: Students indicated that the vast number of exercise questions posed a challenge, preventing them from completing all the exercises within the given timeframe. Consequently, they recommended a reduction in the overall quantity of exercises to alleviate this issue.

• Exercise difficulty: The difficulty level of the exercises was highlighted as a challenge, leading to frustration and discouragement among students, although they have attempted to rework the exercise. Some students resorted to copying answers or seeking help from others to pass the chapters.

• The Learning Management System (LMS) stability: The instability of the system was identified as a problem, with issues such as crashes during high user activity and data loss. Students often had to restart their exercises from scratch due to these system failures. Ensuring a stable and reliable system is crucial to provide a seamless experience for students.

• Implementation of an alert system: Students recommended the implementation of an alert system that notifies them about recommended practice sessions for each chapter.

Students have identified several key areas for improvement in the LMS of the complementary exercise. These include addressing system stability issues, reducing exercise completion times, implementing an alert system for practice sessions, and decreasing the quantity of exercises. Addressing these concerns is essential to promote student engagement and prevent reliance on survival behaviors instead of active participation in the exercises.

Part 3 Exploring the Underlying Causes and Contributing Factors of Academic Dishonesty among Undergraduate Students

The researcher examined the causes and factors associated with students' engagement in academic dishonesty within the context of the general physics 2 course through the lens of the students. The following details provide a comprehensive overview of the cause and various factors identified in this research.

1. Causes and factors influencing dishonest behavior in education: insights from students' perspectives

Behaviors that satisfy individual needs can be categorized as either positive or negative. Positive behaviors include traits like curiosity, active engagement in learning, attentiveness in the classroom, conducting extensive research, and active participation in university activities. On the other hand, negative behaviors manifest as exam corruption and dishonest behavior in school assignments, such as copying others' work, plagiarizing homework, and seeking unauthorized assistance. These behaviors reflect a sense of dishonesty among students. The researcher has synthesized information from student reflections to identify the causes, factors, and methods related to dishonest behavior in education:

• Personal factors: Dishonest behavior can stem from students neglecting lesson reviews, prioritizing social activities over studies, experiencing personal crises, and being unable to fulfill their own needs. Additionally, the strong desire for high exam scores, coupled with the fear of failure and a lack of self-reflection, can lead to a compromised sense of ethics.

• External expectations and pressures: Societal expectations and pressures, such as the need to achieve high grades upon graduation, meet family expectations for timely completion of studies, or secure desirable job opportunities based on academic performance, can contribute to dishonest behavior.

• Economic status: Prolonged graduation and the resulting additional study expenses, combined with unfavorable home conditions, may compel students to explore various means to complete their studies, potentially leading to dishonest behavior.

• Pursuit of Benefits: Students may prioritize the benefits associated with scores, grades, and academic achievements, which can tempt them to engage in dishonest behaviors for personal gain.

The causes and factors contributing to dishonest behavior in education encompass personal aspects, external expectations and pressures, economic status, and the pursuit of personal benefits.

2. *Methods demonstrating academic dishonesty: Insights from students' perspectives*

• Cheating during exams: Students employ various strategies to copy during exams, such as concealing notes on body parts, hiding information inside pencil bags, study materials, erasers, rulers, and color boxes, and sharing them with others for assistance.

• Copying Homework or Exercises: Students resort to different methods to copy homework or exercises, including seeking help from friends or tutors, utilizing communication platforms like Line or Facebook chat, borrowing books from peers to replicate answers, and sharing answers through screenshots.

• Plagiarism: Students engage in plagiarism by directly copying reports or content from friends or sources found on the internet without proper attribution or citation.

• Facilitating Others' Dishonesty: Some students allow their own work to be copied by sharing answers with friends or providing direct assistance.

Dishonest behaviors in education are manifested through methods such as cheating during exams, copying homework or exercises, and facilitating others' dishonesty.

Part 4 Strategies for Preventing and Addressing Educational Dishonesty among Undergraduate Students

The researcher proposed preventive measures and solutions to address the issue of educational dishonesty based on the perspectives of students enrolled in the general physics 2 course during the first semester of the academic year 2020. The following details outline the proposed strategies:

• Instructor adjustment: To foster a culture of honesty and integrity, teachers should act as role models and implement clear guidelines for completing exercises and scoring. This includes ensuring students understand the rules regarding point collection and providing explicit instructions on permissible actions during exercises.

• Lesson content adjustment: The lesson content should incorporate a greater number of problem-solving examples that offer guidance for completing exercises, thereby reducing the difficulty level and allowing students to review problem-solving techniques. Exercises should be tailored to individual abilities, and non-graded pre-class quizzes can be introduced to assess understanding.

• System adjustment: While many students appreciate the ability to revise their exercise answers using the same set of questions, some suggest randomizing the exercise questions to discourage dishonest behavior. Other suggestions include changing the questions each time, incorporating reminders (but not the deadline) for a particular exercise, and implementing specific intervals for pre- and post-class exercises. This may involve weekly exercises or timed intervals to encourage regular practice. Moreover, features such as activating the front camera or screen recording during exercises, through which the teacher can randomly examine the students' behavior, could prove beneficial.

• Reinforcement based on engagement: Rather than solely focusing on achieving a high score, reinforcement for exercise completion should be based on participation and learning engagement. Students who actively practice and engage in exercises receive additional points, thereby fostering motivation and creating a positive learning environment without encouraging dishonest behavior.

The proposed prevention guidelines involve adjusting the exercise content to match students' abilities, establishing designated periods for exercise completion, and implementing a complementary exercise system that emphasizes participation and regular review rather than solely focusing on score achievement.

Discussion

The congruence between our exploratory findings and established concepts and theories, as well as our interpretation, has resulted in the emergence of three key findings.

First finding: Definition of Educational Dishonest Behavior and Dishonest Behavior in Doing Complementary Exercises

Based on the empirical findings of this study, it has been determined that dishonest behavior encompasses a wide range of actions or expressions, including cheating, corruption, non-compliance with established rules, and causing injustice. This definition is consistent with the definitions derived from existing literature. Specifically, within the educational context, dishonesty refers to behaviors or actions that lack transparency and integrity, encompassing verbal, physical, and behavioral misconduct pertaining to knowledge, thoughts, feelings, and intentions. Illustrative examples of such behaviors include lying, cheating, copying homework or exercise reports, stealing exams, signaling answers to peers, permitting others to copy exams, and misusing electronic media for unauthorized purposes. Furthermore, in the specific context of completing complementary exercises, the concept of educational infidelity, as elucidated by Bushway and Nash (1977), extends to the unauthorized use of notes and the replication of answers from other students' papers during exams. In light of this understanding, it can be concluded that copying exercises and reports constitutes a form of dishonest behavior.

The implications of dishonest behavior in completing complementary exercises are elucidated by the findings of this study. Students explicitly acknowledge that copying exercises is an act of dishonesty, a notion supported by previous studies conducted by Wichiranon (2010) and Kornpetpanee (2006), which identified behaviors lacking moral integrity in learning exercises as forms of dishonest behavior. Consequently, these findings align with the perspectives of the participants in our study, who defined the dishonest behavior in doing complementary exercises as follows. "The act of copying exercises and sharing answers, signifies the lack of honesty, driven by the desire to obtain higher scores, which directly impacts students' academic performance. Moreover, it engenders a sense of unfairness within the group, as individuals who approach the exercises with honesty may achieve lower scores or academic outcomes compared to their dishonest counterparts."

Second finding: Causes, Contributing Factors, and Manifestations of Dishonest Behavior

The causes and factors underlying dishonest behavior encompass personal aspects, external expectations and pressures, economic status, the pursuit of benefits, and students' perceptions of unethical behavior and their behavioral intentions. Specific manifestations of dishonest behavior include copying exams, copying homework or exercises, plagiarism, and facilitating others' dishonesty. Drawing upon Ajzen's Theory of Planned Behavior, the diagram highlights the factors contributing to dishonest behavior among undergraduate students in the realm of higher education. Human behavior is influenced by attitude toward behavior, subjective norms, and behavior control ability. Behavioral intention, a critical determinant, emerges from the interplay of three fundamental factors: attitude towards the behavior, subjective norms, and perceived behavior control, ultimately culminating in the manifestation of intention and subsequent engagement in behavior which is dishonest conduct. Attitude, in the context of behavior, pertains to an individual's evaluative stance towards a specific action, with positive attitudes often leading to stronger intentions to perform that behavior. Subjective norm involves the perceived societal expectations or judgments about a behavior, encompassing the influence of self and important others, such as family, friends, and colleagues, on an individual's behavioral intentions. When these significant others are perceived to endorse a behavior, an individual's intention to conform is likely heightened. Perceived behavioral control refers to an individual's assessment of the feasibility of performing a behavior, with a greater sense of control directly

correlating with stronger behavioral intentions. These three factors—attitude, subjective norm, and perceived behavioral control—jointly contribute to the formation of an individual's behavioral intentions, which are key predictors of actual behavior. However, while intentions play a crucial role, the Theory of Planned Behavior acknowledges that there are additional elements and external influences that can affect behavior, indicating that the theory, while valuable in understanding and predicting actions, does not encapsulate the entire human behavioral complexities. (Ajzen, 1985). The implications of this finding are discussed as follows:

As displayed in Figure 2, the attitude toward behavior is influenced by the combination of personal factors, expectations and pressures from others, as well as economic status and perceived benefits. Students often associate dishonest behavior with the desire to achieve favorable grades or fulfill degree requirements; such connection becomes a group conformity. Perceived behavior control is shaped by personal factors and external influences such as the expectations and pressures imposed by others, thereby impacting an individual's decision-making processes and self-regulation. These findings are consistent with the research conducted by Tongsamsi and Promgird (2017), which revealed the negative impact of positive attitudes toward honesty on the likelihood of engaging in dishonest behavior. Similarly, Wichiranon's (2010) study explored the subjective norm, attitude toward immorality, educational honesty, intention, and perceived control of educational honesty, all of which contribute to the intention to engage in the acts of educational dishonesty. According to the Theory of Planned Behavior, 'intention' serves as a proximal indicator of an individual's readiness to engage in dishonest behavior, acting as the immediate precursor to the action itself. This intention is shaped by an amalgamation of attitudes toward dishonesty, the perceived norms surrounding such behavior, and the individual's sense of control over engaging in dishonest acts. When these elements align in favor of dishonesty, the intention to act unethically strengthens, thereby increasing the likelihood of the behavior's occurrence.
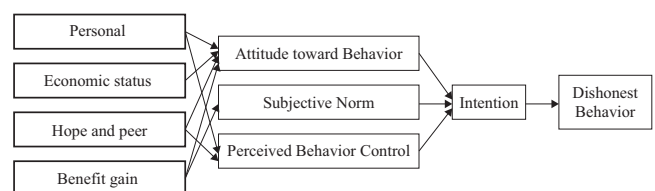

Figure 2 Diagram illustrating educational dishonest behavior grounded in the framework of the Theory of Planned Behavior

The descriptions of behavioral attitudes align with Bandura's Social Learning Theory (1986), which emphasizes the importance of continuous interactions between individuals, their environment, and the emerging behaviors during the learning process. According to this theory, dishonest behavior is considered a deviation from societal norms and regulations. Individuals who have learned from previous experiences of non-compliance with these norms are more inclined to prioritize their own interests, considering factors such as personal benefits, social expectations, and economic status, all of which shape their decision-making processes. When students face challenges in effectively managing their study time, it can potentially lead to engaging in dishonest behavior within educational contexts, as they may imitate certain role models they have observed.

Additionally, in relation to the Self-control Theory, Gottfredson and Hirschi (1991) conducted a study examining the influence of self-control on dishonest behavior. Their findings revealed that individuals with low self-control are more prone to engaging in unethical actions, primarily motivated by personal gain. Conversely, students who exhibit higher levels of self-control demonstrate more appropriate behavior and lower levels of dishonesty. This finding aligns with the research conducted by Wahsa (2011), which emphasized the significance of recognizing the value of honesty, practicing self-control, and fostering a school environment that promotes ethical conduct as predictors of honest behavior.

Moreover, the socialization theory provides valuable insights into the underlying causes and factors that contribute to dishonest behavior. According to this theory, individuals engage in dishonesty as a means of deviating from established societal norms and regulations. Various reasons, excuses, or justifications arise from external expectations, peer pressure, and economic influences. These factors exert a significant impact on the decision-making processes, prompting individuals to adopt either positive or negative behavioral attitudes that prioritize personal gains while neglecting the ethical principles instilled through upbringing, education, and social norms. Over time, this behavior becomes entrenched as dishonesty. Family, schools, and religious institutions assume pivotal roles in shaping individuals' minds and cultivating more appropriate conduct. These findings are consistent with the research conducted by Tongsamsi and Tongsamsi (2018), which emphasizes the influential role of schools, teachers, and parents in the occurrence of dishonest behavior, highlighting the significance of implementing effective strategies to address and rectify such behavior (Tongsamsi & Tongsamsi, 2018).

Hence, the presence of academic dishonesty in the completion of complementary exercises can be comprehended through the lenses of various theories, including the Theory of Planned Behavior, Social Learning Theory, Self-Control Theory, and the theory of socialization. These theoretical frameworks not only shed light on the fundamental causes and factors that contribute to dishonest behavior in an educational context but also offer valuable guidance on preventive and remedial measures to tackle this issue effectively among students.

Third Finding: Strategies for Preventing and Addressing Dishonest Behavior

In this study, strategies for preventing and addressing the issue of dishonest behavior among undergraduate students in education involved adjusting the instructor's approach, which encompasses modifying the exercise content to suit the students' individual abilities, ensuring they are neither too difficult nor too easy. Additionally, implementing a designated timeframe for completing exercises and establishing a structured complementary exercise system to reinforce learning. These strategies should aim to shift the focus from solely achieving high scores to measuring active participation in the learning process. Furthermore, the analysis of these strategies in the context of existing theories yielded the following results:

• *Instructor adjustment:* If the teacher serves as a positive role model, adhering to rules and agreements, according to the principles of social learning theory, students are more likely to exhibit appropriate behavior.

• *Lesson content modification:* Due to the students' reflection on the concerning number and difficulty of exercise items, issuing appropriate questions based on individual student abilities promotes social learning.

• *Effective utilization of online learning management system:* Implementing features such as editable answers, consistent question sets, and periodic reminders for exercise completion enhances student satisfaction. Additional functionalities, such as enabling front camera or screen records, promote learning based on social learning theory and create an environment that encourages appropriate behavior.

• *Positive reinforcement for exercise completion*: Applying social learning theory, socialization, and self-control concepts, this strategy would motivate learners to adhere to rules and follow teachers' practices, emphasizing knowledge acquisition rather than solely pursuing high scores. Incentives such as extra points or praise for accurate and frequent completion of practice exercises can support this approach.

Therefore, by applying these concepts and theories, the promotion of social learning among undergraduate students through positive reinforcement, socialization, and self-control, educational institutions can foster a culture of honesty in academic settings.

Conclusion and Recommendation

Practical Recommendations and Policies

1. Clearly define the guidelines for completing complementary exercises, including restrictions on internet searches, collaboration with others, and point allocation.

2. Establish transparent penalties for dishonest behavior in exercise completion to ensure students understand the consequences. Emphasize the importance of upholding honesty in education and discourage imitation of dishonest acts.

3. Develop technological solutions to deter dishonest behavior in exercise completion. For example, incorporate features that allow the use of the front camera during exercise sessions, screen recording, and data transmission to teachers for monitoring purposes.

4. Implement a comprehensive policy to promote educational integrity, fostering ethical awareness among both students and teachers. Cultivate a culture of integrity within the academic institution.

Suggestions for Further Research

1. Investigate the impact of exercise difficulty on the occurrence of dishonest behavior in education. Conduct quantitative studies to examine how the level of difficulty in exercises influences the likelihood of engaging in dishonest acts.

2. Explore the relationship between students' scores and their engagement in dishonest behavior. Conduct quantitative research to analyze the correlation between academic performance and the occurrence of educational dishonesty.

3. Conduct a comparative analysis of students' dishonest behavior across different academic years. Compare the prevalence of academic dishonesty among students in different stages of their academic journey to identify any patterns or trends.

4. Consider the impact of extended course completion time on academic dishonesty. Investigate whether participants who take longer to complete their courses, possibly due to greater incentives for dishonest behavior, exhibit higher rates of academic dishonesty compared to those who finish within the standard timeframe.

Ethics of Human Research

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Conflict of Interest

The authors declare that there is no conflict of interest.

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