

Students' Approaches to Learning in Higher Education: A Study of Deep and Surface Learning among English Majors at Elmergib University

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مقاربات الطلبة في التعليم العالي: دراسة حول التعلم العميق والتعلم السطحي لدى طلبة قسم اللغة الإنجليزية بجامعة المرقب

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قسم اللغة الإنجليزية، كلية الآداب، الخمس، جامعة المرقب، ليبيا

Received: 07-11-2025	Accepted: 20-12-2025	Published: 13-01-2026
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Abstract

Research on student learning approaches is significantly important as it is an effective tool for lecturers to understand their teaching styles and how their students learn. Understanding learning approaches implies a shift from the focus on what students learn to how they learn. The distinction between deep approach and surface approach to learning is crucially important for lecturers to understand how students learn and accordingly have the opportunity to accommodate various learning needs of their students. This paper investigates the learning approaches adopted by English students in University of Elmergib, Faculty of Arts – Khoms. It also aims to identify factors that are associated with the adoption of deep or surface approaches, if there are any. Data were collected from 80 English students in the Faculty of Arts using the Revised Two-Factor Study Process Questionnaire (R-SPQ-2F).

Keywords: Learning Approaches; Deep Learning; Surface Learning; Higher Education.

الملخص

يُعد البحث في مقاربات تعلم الطلبة ذات أهمية بالغة في ميدان التعليم العالي، لما يتتيه من فهم أعمق لكيفية تعلم الطلبة، وليس فقط ما يتعلمونه. ويسمح هذا الفهم في تمكين أعضاء هيئة التدريس من تطوير ممارساتهم التعليمية بما يتلاءم مع احتياجات المتعلمين المختلفة. تهدف هذه الدراسة إلى استقصاء مقاربات التعلم المعتمدة لدى طلبة قسم اللغة الإنجليزية بجامعة المرقب – كلية الآداب بالخمس، مع التركيز على التمييز

بين التعلم العميق والتعلم السطحي، ومحاولة الكشف عن العوامل المرتبطة بتبني كل منهما. اعتمدت الدراسة على المنهج الوصفي التحليلي، وتم جمع البيانات من عينة مكونة من (80) طالباً وطالبة باستخدام الاستبانة المعدلة ثنائية العوامل لمقارنة التعلم (R-SPQ-2F). أظهرت النتائج أن مقاربة التعلم السطحي كانت أكثر شيوعاً بين الطلبة مقارنة بمقاربة التعلم العميق، على الرغم من وجود مؤشرات تدل على قدرة الطلبة على التعلم العميق عند ارتباط الموضوعات باهتماماتهم الشخصية. وتخلص الدراسة إلى ضرورة إعادة النظر في تصميم المناهج وأساليب التقويم، بما يعزز تبني مقاربات التعلم العميق داخل البيئة الجامعية.

الكلمات المفتاحية: مقاربات التعلم؛ التعلم العميق؛ التعلم السطحي؛ التعليم العالي.

Introduction

For several decades, scholars and educational researchers have attempted to understand not only what students learn, but also how they learn. The concept of learning approaches or study approaches offers an essential framework for understanding the complex relationship between a student's motivation, their chosen strategies, and the learning context. In 1976, educational psychologists, Ference Marton and Roger Saljo identified two main significant approaches of learning, Deep and surface, see table (1). Since then, researchers all over the world have developed Marton and Saljo's work to design up to date models that can be used effectively to measure students' approaches to learning. Biggs & Tang (2011) state that the deep and surface approaches are not fixed personality traits but are rather relational, they reflect the interaction between the student and the learning task within a specific context.

A deep approach to learning involves the intention to understand and derive meaning. Students' focus is on the underlying ideas, principles, and structure of the subject matter. This generally involves a few learning habits or practices, for example relating new concepts to previous knowledge and personal experience. Also, in this approach students critically discuss evidence and arguments, and engage with the content in a holistic and active manner. The motivation is intrinsic, driven by curiosity and a deep interest in their study. Marton and Säljö (1976) emphasise that deep-level processors focused on "what the text was about; that is, what the author intended to say" (p.9). The outcome of deep approach is a rich, complex, profound and long-lasting understanding that can be applied in other learning situations and contexts.

On the other hand, surface learning approach is defined as an external, instrumental focus Entwistle (1998). The student's goal is to fulfil task requirements with minimal effort, often through rote memorization and reproduction of information. Learning is viewed as an external imposition, and the student is often passive, unable to vision the bigger picture or the underlying principles. According to Entwistle (1998) a surface approach involves "an intention simply to reproduce parts of the content... coupled with a reliance on rote learning" (p. 15). In the literature, it is well established that research on

student learning approaches can be very useful to lecturers for improving their teaching and understanding their students' learning practices. Hence lecturers will have the ability to perform according to the diverse learning needs of their students.

Table 1: Traditional Learning Approaches

Learning Approach	Learning Motive	Learning Strategy
Deep Approach (DA)	Deep motive (DM) learners have intrinsic interest in what is being learned; to develop competence in their academic subjects.	Deep strategy (DS) learners seek meaning and involves processes of high cognitive level, such as searching for analogies relating to previous knowledge and playing with tasks and thinking about it constantly.
Surface Approach (SA)	Surface motive (SM) is to meet task requirements with little engagement: learners focus more on passing assessments or retain knowledge temporarily.	Surface strategy (SS) is rote learning where learners use rehearsal learning or repetition with minimal effort.

In the context of Libya, many studies were conducted to measure students learning e.g. Al-Ahmadi (2008) and Abushina (2017), and they concluded that students often used surface learning approaches or rote memorization with the intention of understanding new ideas 'deep memorization'. So, this paper aims to investigate the current learning approaches employed by university students in Libya, and it attempts to contribute to the body of knowledge. Research shows that there are three main areas influencing the students' deep approach towards learning. The teaching and learning environment, student characteristics and perceptions, and assessment design. An inspiring, knowledgeable, and passionate teacher who shows genuine interest in their subject and is able to motivate students to move beyond the surface. Biggs and Tang (2011) stress that good teaching is a primary factor. When teachers are enthusiastic and convey the intrinsic interest of the subject, students are more likely to engage in learning deeply. Biggs & Tang (2011) claim that "students are more likely to go beyond surface requirements if they can see that their teachers are enthusiasts, even experts, in their field" (p. 24). The second area is student characteristics and

perceptions. These are intrinsic elements – interest and motivation - connected to the student's mindset and background. This is the case when a student engages willingly in the subject matter rather than forced to pass exams, they are far more likely to adopt a deep approach. Entwistle (2000) clearly links intrinsic motivation to a deep approach, contrasting it with the extrinsic motivation (fear of failure, desire for grades) that drives a surface approach. (Entwistle, 2000) states that "The deep approach is associated with intrinsic motivation: interest in the subject matter and a desire to learn and understand. The surface approach is associated with extrinsic motivation: fear of failure and concern with meeting requirements with minimal effort" (p. 2). The third area is assessment design. It is indeed the most powerful method for change, as "assessment drives learning" (Miller, 1990). Authentic and meaningful assessment is crucially important because it reflects the real-world challenges for example research projects, portfolios, case studies, and presentations. These involve students in useful practices of analysis, synthesis, and application, meanwhile discouraging rote learning. Bastiaens, and Kirschner (2004) define "authentic assessment" as tasks that encourage students to apply the same competencies, attitudes, and knowledge as they would in a professional setting, which reinforces a deep approach. Biggs & Tang (2011) state that "If we wish to introduce students to the world of the historian, we must assess them as if they were historians... not as if they were parrots who could recite historical facts".

Many psychometric techniques were used to design questionnaires for assessing students' approaches to learning. The Study Process Questionnaire (SPQ) was first made by John Biggs (1987). It contained three approaches to learning: surface, deep and achieving, each with a motive and strategy subscale. It has been applied globally to measuring students' approaches to learning. However, several studies found that a two-factor model with deep and surface approaches had remarkable results (Kember & Leung, 1998; Zhang and Sternberg, 2000). Therefore, the Revised Two-Factor version of the Study Process Questionnaire (R-SPQ-2F) has been initiated for this purpose (Biggs et al., 2001). Students' approach to learning had two components: i) how the students approach the task (strategy) and ii) why the students want to approach it (motive) (Biggs, 1987). Therefore, his questionnaire categorized the students on the basis of deep approach (DA) and surface approach (SA) of learning.

In conclusion, the literature on deep and surface approaches to learning provides effective techniques for understanding student behaviour and establishing excellent educational environments. It evidently confirms that the quality of student learning is not merely a function of their ability or effort but is profoundly shaped by the teaching and assessment policy. The educators are required to initiate "aligned" teaching systems that make a deep approach not only possible

but necessary and rewarding. Educators who are passionate to go beyond a poor model that blames students for poor learning. This body of research empowers teachers to adopt and embrace deep learning styles in their classes in addition; it encourages teachers to change their attitudes towards how learners learn.

Objectives of the Study

This study attempts to answer the following research questions:

- 1) What is the preferred learning approach of English students at Elmergib University?
- 2) What are the factors that are associated with the adoption of deep or surface approaches, if there are any.

Methodology

The study was conducted in the academic session of 2025/2026 to the English students at Elmergib University. 80 male and female students were randomly chosen from year one to year four. Students are native speakers of Arabic studying English as their core major.

Instruments of Data Collection

Students Learning Questionnaire

The instruments were carefully adapted from The Revised Two Factor Study Process Questionnaire (R-SPQ-2F). The questionnaire is a self-report used in this study to collect information to identify students learning approaches in a Libyan University. The questionnaire is formulated in the light of the literature review (See Biggs et al., 2001), and the researcher's interest in discovering and understanding the approaches to learning in Libya (Refer to appendix 1). The questionnaire consists of 20 items on a 5-point Likert scale. These are: 1 = Strongly Disagree, 2 = Disagree, 3 = Uncertain, 4 = Agree, 5 = Strongly Agree. It measures the two approaches, deep and surface. The information collected from the questionnaire was analyzed according to Biggs et al. (2001) scoring system. The respondents' personal information such as faculties, part, gender, and age. After collecting the participant responses, the data were analyzed quantitatively using descriptive statistics involving percentages and frequency distribution, cross tabulations and also performed test by using the Statistical Package of Social Sciences (SPSS version 23). The choice of R-SPQ-2F was due to its good reliability and wide employment. It is a validated tool for measuring students learning approaches (Biggs, Kember & Leung, 2004; Justicia et al., 2008; Lopes & Nihei, 2020; Yilmaz & Orhan, 2011).

Techniques of Data Analysis

Quantitative techniques of data analysis were used in this study. Data analysis of the questionnaire explaining statistically in numbers and percentages the results obtained from the questionnaire. Finally, conclusions and recommendations were given based on the findings.

Findings And Discussions

Profile of Respondents

A total of 80 students participated in the study. 13 students (16%) were male and 67 (84%) were female. They are English students at Elmergib University, Faculty of Arts - Khoms. They were randomly chosen from year one to year four as shown in table (2).

Table (2): Profile of Respondents

variable		Number	percentage
Gender	Male	13	%16
	Female	67	%84
Year of Study	Year 1	18	%22
	Year 2	22	%28
	Year 3	17	%21
	Year 4	23	%29

Preferences of Learning Approach

Table (3) shows the summary percentages and frequencies for each approach which indicate a difference among students' learning approaches. The findings revealed that learners used both approaches. The table shows that surface learning behaviors are more commonly used by students with 46.88% than deep learning practices 34.50%. However deep learning items elicit more disagreement 37.25% than surface items 23.00%. Uncertainty levels are almost similar around 12% for both approaches, suggesting some ambivalence. Overall, surface approach seems more prevalent in this student sample, though the questionnaire indicates that deep learning is still used, particularly when topics are of personal interest.

Table (3): Summary Results of Students Learning Approaches

No. of Items	APPROACHES TO LEARNING	Agreement	Disagreement	Uncertain
Items 1-10	Deep Approach	34.5%	37.5%	12.25%
Items 11-20	Surface Approach	46.5%	23%	11.38%

Total Student Respondents = 80

Data Analysis and Results

The following is a detailed analysis of the data captured from the Student Learning Questionnaire, which aimed to measure the prevalence of deep and surface learning approaches among students. This analysis studies data from 80 students employing a learning approaches questionnaire derived from the R-SPQ-2F framework (Biggs et al., 2001).

The descriptive analysis discovers dominant trends in deep learning and surface approach behaviors, organizing findings into thematic categories to illuminate the cohort's predominant study motivations and strategies. The questionnaire contained 20 items, each measured on a five-point Likert scale ranging from Strongly Disagree to Strongly Agree, with an additional "Uncertain" (UN) option. Data from 80 students were analyzed descriptively to identify trends, patterns, and contradictions in their reported learning behaviors and attitudes.

Table 4: Students Learning Questionnaire

A	EVIDENCE OF DEEP LEARNING	Disagreement				Agreement				Uncertain	
		DA		SDA		A		SA		UN	
		N	%	N	%	N	%	N	%	N	%
1	I find that at times studying gives me a feeling of deep personal satisfaction.	5	6%	6	8%	27	34%	37	47%	5	6%
2	I find that I have to do enough work on a topic so that I can form my own conclusions before I am satisfied.	39	48%	20	25%	11	14%	6	8%	4	5%
3	I feel that I'm getting a lot of satisfaction out of studying topics that really interest me.	10	12%	6	7%	14	18%	40	51%	10	12%
4	I feel that virtually any topic can be highly interesting once I get into it.	34	42%	15	19%	18	22%	7	9%	6	8%
5	I work hard at my studies because I find the material interesting.	24	30%	15	19%	9	11%	4	5%	28	35%
6	I find that studying academic topics can at times be as exciting as a good novel or movie.	38	48%	14	17%	10	13%	6	7%	12	15%
7	I test myself on important topics until I understand them completely.	8	10%	17	21%	22	28%	25	31%	8	10%
8	I find I have to discuss new ideas with other people to really understand them.	29	36%	14	18%	13	16%	12	15%	12	15%
9	I try to relate what I have learned in one subject to what I learn in other subjects.	42	52%	17	21%	3	4%	7	9%	11	14%
10	I try to relate new material, as I am reading it, to what I already know on that topic.	35	44%	16	20%	10	12%	13	17%	6	7%
B EVIDENCE OF SURFACE APPROACH											
11	My aim is to pass the course while doing as little work as possible.	15	19%	9	11%	31	39%	20	25%	5	6%
12	I do not find my course very interesting, so I keep my work to the minimum.	20	25%	14	17%	25	31%	15	19%	6	8%
13	I am discouraged by a poor mark on a test and worry about how I will do on the next test.	23	29%	10	12%	18	23%	13	16%	16	20%
14	I find I am only studying what is provided in the course outline and textbook.	14	18%	6	8%	33	41%	16	20%	11	13%
15	I see no point in learning material which is not likely to be in the examination.	11	14%	13	16%	26	33%	24	30%	6	7%
16	I learn some things by rote, going over and over them until I know them by heart even if I do not understand them.	10	13%	8	9%	35	44%	17	21%	10	13%
17	I generally restrict my study to what is specifically set as I think it is unnecessary to do anything extra.	15	19%	9	11%	31	39%	18	22%	7	9%
18	I find the best way to pass examinations is to try to remember answers to likely questions.	6	7%	7	9%	36	46%	19	23%	12	15%
19	I tend to read very little beyond what is required for completing assignments.	19	23%	6	8%	26	33%	15	19%	14	17%
20	I find it is not helpful to study topics in depth. It confuses and wastes time, when all you need is a passing acquaintance with topics.	12	15%	10	13%	29	36%	23	29%	6	7%

Number of students: 80

1- Descriptive analysis of deep learning indicators

Items 1 to 10 were designed to collect evidence of a deep learning approach, characterized by intrinsic motivation, personal engagement, and integrative thinking.

a- Predominant intrinsic motivation and effective engagement with learning

Data captures students' internal drive and emotional reward derived from the learning process which is the main component of a deep approach. The data finds that learning engagement is strongest when attached to personal interest and satisfaction. Many students seem to derive deep personal satisfaction and interest-driven gratification from their learning, pointing out a sound foundation of intrinsic motivation that aligns with the concepts of deep learning. Item 1 for example shows the majority 81% agreed or strongly agreed that studying provides deep personal satisfaction, indicating high intrinsic motivation among respondents. Also in item 3, 69% of students reported deriving satisfaction from studying topics of personal interest, which reinforces the role of interest-driven engagement.

b- Cognitive strategies and social constructivist learning

The questionnaire indicates that students have strong mastery orientation. According to item 7, 59% of the respondents said they test themselves on important topics until complete understanding which is a key metacognitive self-regulation strategy (Zimmerman, 2002).

However, the questionnaire detected weak integrative and elaborative processing. For example, in item 9, few students 13% stated that they attempt cross-disciplinary integration, and in item 10 only 29% of the respondents actively relate new material to prior knowledge. Also, in item 2, 22% of the learners engage sufficiently to form independent conclusions. These findings show that students apply compartmentalized rather than holistic learning practices. While they employ deep processing for specific important topics of their choice, they neglect constructive alignment (Biggs, 1996) across the curriculum. This shows a strategic but narrow deep approach, probably driven by assessment requirements rather than genuine integrative habits.

The low reliance on collaborative discourse suggests a predominantly individualistic learning culture. Only 31% of students in item 8 said that they use discussion to understand new ideas.

This contrasts with Vygotskian social constructivism, where knowledge is co-constructed through dialogue. The finding may reflect curricular design that undervalues collaborative tasks or assessment that rewards individual performance.

c- Variable Interest in Academic Topics

In item 4, 61% of students disagreed that any topic could become interesting if engaged deeply, suggesting topic selectivity. In addition, 65% students in item 6 disagreed that academic topics can be as exciting as entertainment media, reflecting a perceived divide between academic and personal engagement.

2- Descriptive analysis of surface learning indicators

Items 11 to 20 investigated surface learning approaches, marked by extrinsic motivation, minimal effort, and exam-focused strategies.

a- Pervasive assessment-driven and instrumentalist approach

This theme involves a utilitarian orientation toward learning, where the fundamental aim is successful assessment performance with minimal necessary effort. It is an approach to education that prioritise the practical value and economic usefulness of learning, with the aim of increasing the overall benefit for the majority of learners. This is a hallmark of a surface approach. From the questionnaire, instrumentalist strategies are common. Item 18 "I find the best way to pass examinations is to try to remember answers to likely questions" received 69% agreement. In addition, item 16 "I learn some things by rote... even if I do not understand them" is confirmed by 65% of students. It seems that the learning environment greatly emphasizes strategic memorization over comprehension. A deeply held belief that passing the exams is best fulfilled through the anticipation and recall of model answers, promoting a transactional relationship with knowledge.

b- Reliance on externally defined boundaries for study

This theme points out students' tendency to limit their learning engagement mainly to teachers' instructions, fixed curriculum and course requirements, avoiding exploratory or self-directed study. According to the questionnaire, item 14, the majority of respondents 61% restrict their study scope. "I find I am only studying what is provided in the course outline and textbook" This statement is further supported in item 17 "I generally restrict my study to what is specifically set..." where 61% of students agreed that they only study materials provided by their teachers, and it is always their preference not to study extra resources. Similarly in item 19, "I tend to read very little beyond what is required... where 52% of students agreed to the same concept.

c- Restricted engagement and reliance on rote learning

Memorization without comprehension is widespread and accepted practice, especially for assessment preparation. This indicates an instrumental view of learning where only assessed content is valued. According to the questionnaire, again in items 14 and 16 students reported studying is limited to materials provided by lecturers, and they rarely explore or research concepts through other sources such as books or online journals, 61% and 65% respectively. Respondents also stated that they use rote learning or memorization even without

understanding. Moreover, in item 17, 61% of students admitted confining their study to fixed curriculum and avoiding extra engagement. Item 20 also reinforced surface learning practices where 65% of students agreed that studying in depth is not helpful and confusing.

Conclusions and Recommendations

Information from the questionnaire demonstrates a major student weakness in applying deep learning strategies, particularly those relating to connecting knowledge across contexts. This suggests a gap between motivational intent and strategic execution. For example, in item 2, 73% of students disagreed or strongly disagreed with the statement about forming their own conclusions before feeling satisfied, suggesting a reliance on external validation or structured guidance. From the researcher's observations and personal contact with students and lecturers at the Faculty of Arts, the majority of students fully rely on teachers' guidance and instructions. Students believe that seeking knowledge outside their teachers' instructions is useless. Often their argument is that any knowledge beyond curriculum – teachers' instructions - will not be included in their assessments, therefore, insignificant. Noticeably, item 9 shows that 73% of students disagreed that they try to relate learning across subjects, indicating compartmentalization of knowledge. As students declared great satisfaction, there is a severe lack of engagement in integrative cognitive practices. The responses show a learning process where subjects remain compartmentalized, and new knowledge is not often linked to existing cognitive frameworks. This is noted as teachers in the department of English lack solid cross-curricular teaching in order to connect concepts to real life applications. Similarly, item 10 captured 64% of disagreement with relating new material to prior knowledge, indicating to a potential gap in integrative cognitive strategies or students have misconceptions. This study has found a dualistic learning profile among respondents, strong deep learning tendencies and students are capable of deep learning when motivated by interest as shown in items 1, 3, 7. Meanwhile, many students admitted to applying surface learning behaviours in effort regulation, exam strategy, and integrative thinking as found in items 9, 11, 15, 18). However, they default to surface strategies due to perceived system demands as elicited from items 11, 15, 18, 20. This indicates that while students can engage deeply in their learning when motivated by interest, they often tend to apply surface strategies due to perceived curricular requirements, assessment system, or a lack of integrative teaching support.

Based on the analysis and findings from data collected from the participants, the researcher has the following recommendations:

1- For Institutional Policy (Pedagogical interventions)

- The Faculty of Arts in Elmergib University is strongly recommended to review curriculum contents. Is the curriculum fostering content over depth? The faculty must encourage departments to promote deep engagement with learning.
- The faculty is encouraged to incentivize teaching innovation by supporting and rewarding departments who restructure their curriculum and assessment methods to improve deep learning.
- Design courses to keep productive engagement and build small, low-stakes collaborative discussions for example think-pair-share and peer discussion into lectures to encourage lengthy and group discussion.

2- For Instructors and Course Designers (Curriculum and assessment methods)

- Align learning outcomes, teaching activities, and assessments transparently (Biggs & Tang, constructive alignment, 2011).
- undertake realistic assessment methods that require application, analysis, and discourage tests that reward memorization.
- Application of formative assessments to encourage ongoing and timely feedback rather than one-time performance.

3- Student Academic Support and Development

- Harness study skills that teach deep processing strategies for example, elaboration and self-reflection.
- Encourage self-testing and reflection through low-stakes quizzes and peer teaching.
- Provide healthy environment for interest development through choice, relevance, and narrative framing of content - strategic presentation of a message.

APENDICES

Appendix (1): Students Approaches to Learning Questionnaire: Deep or Surface?

Dear student,

Thank you for taking part in this questionnaire which seeks information about students approaches to learning. It is accordingly important that you answer each question as honestly as you can. Your answers will be treated. The questionnaire will take you 10-15 minutes to complete it There is no right way of studying. It depends on what suits your own style and the course you are studying. Please try to make a real effort to answer all questions. Many thanks for your cooperation
Dr. Abdelnaser Abushina

Part 1: General information

1- Gender: -Male -Female
 2- How old are you? (.....)
 3- Nationality: -Libyan -Other (specify)

4- Year current in university: First Second Third Fourth

Part 2: Your learning experiences in English Department: Please circle the number which indicates your level of agreement on the statement identified below:

1= Strongly disagree	2= Disagree	3= Uncertain	4= Agree	5= Strongly agree
A- Deep Approach				
1.	I find that at times studying gives me a feeling of deep personal satisfaction.	1	2	3
2.	I find that I have to do enough work on a topic so that I can form my own conclusions before I am satisfied.	1	2	3
3.	I feel that I'm getting a lot of satisfaction out of studying topics that really interest me.	1	2	3
4.	I feel that virtually any topic can be highly interesting once I get into it.	1	2	3
5.	I work hard at my studies because I find the material interesting.	1	2	3
6.	I find that studying academic topics can at times be as exciting as a good novel or movie.	1	2	3
7.	I test myself on important topics until I understand them completely.	1	2	3
8.	I find I have to discuss new ideas with other people to really understand them.	1	2	3
9.	I try to relate what I have learned in one subject to what I learn in other subjects.	1	2	3
10.	I try to relate new material, as I am reading it, to what I already know on that topic.	1	2	3
B -Surface Approach				
11.	My aim is to pass the course while doing as little work as possible.	1	2	3
12.	I do not find my course very interesting, so I keep my work to the minimum.	1	2	3
13.	I am discouraged by a poor mark on a test and worry about how I will do on the next test.	1	2	3
14.	I find I am only studying what is provided in the course outline and textbook.	1	2	3
15.	I see no point in learning material which is not likely to be in the examination.	1	2	3

16.	I learn some things by rote, going over and over them until I know them by heart even if I do not understand them.	1	2	3	4	5
17.	I generally restrict my study to what is specifically set as I think it is unnecessary to do anything extra.	1	2	3	4	5
18.	I find the best way to pass examinations is to try to remember answers to likely questions.	1	2	3	4	5
19.	I tend to read very little beyond what is required for completing assignments.	1	2	3	4	5
20.	I find it is not helpful to study topics in depth. It confuses and wastes time, when all you need is a passing acquaintance with topics.	1	2	3	4	5

End of Questionnaire

Thank you

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Compliance with ethical standards

Disclosure of conflict of interest

The authors declare that they have no conflict of interest.

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