

Cambridge IGCSE™

ENTERPRISE**0454/12**

Paper 1 Case Study

October/November 2025

MARK SCHEME

Maximum Mark: 100

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the October/November 2025 series for most Cambridge IGCSE, Cambridge International A and AS Level components, and some Cambridge O Level components.

This document consists of **25** printed pages.

PUBLISHED**Generic Marking Principles**

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptions for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

GENERIC MARKING PRINCIPLE 5:

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

GENERIC MARKING PRINCIPLE 6:

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

PUBLISHED**Social Science-Specific Marking Principles
(for point-based marking)****1 Components using point-based marking:**

- Point marking is often used to reward knowledge, understanding and application of skills. We give credit where the candidate's answer shows relevant knowledge, understanding and application of skills in answering the question. We do not give credit where the answer shows confusion.

From this it follows that we:

- a** DO credit answers which are worded differently from the mark scheme if they clearly convey the same meaning (unless the mark scheme requires a specific term)
- b** DO credit alternative answers/examples which are not written in the mark scheme if they are correct
- c** DO credit answers where candidates give more than one correct answer in one prompt/numbered/scaffolded space where extended writing is required rather than list-type answers. For example, questions that require *n* reasons (e.g. State two reasons ...).
- d** DO NOT credit answers simply for using a 'key term' unless that is all that is required. (Check for evidence it is understood and not used wrongly.)
- e** DO NOT credit answers which are obviously self-contradicting or trying to cover all possibilities
- f** DO NOT give further credit for what is effectively repetition of a correct point already credited unless the language itself is being tested. This applies equally to 'mirror statements' (i.e. polluted/not polluted).
- g** DO NOT require spellings to be correct, unless this is part of the test. However spellings of syllabus terms must allow for clear and unambiguous separation from other syllabus terms with which they may be confused (e.g. Corrasion/Corrosion)

2 Presentation of mark scheme:

- Slashes (/) or the word 'or' separate alternative ways of making the same point.
- Semi colons (;) bullet points (•) or figures in brackets (1) separate different points.
- Content in the answer column in brackets is for examiner information/context to clarify the marking but is not required to earn the mark (except Accounting syllabuses where they indicate negative numbers).

3 Calculation questions:

- The mark scheme will show the steps in the most likely correct method(s), the mark for each step, the correct answer(s) and the mark for each answer
- If working/explanation is considered essential for full credit, this will be indicated in the question paper and in the mark scheme. In all other instances, the correct answer to a calculation should be given full credit, even if no supporting working is shown.
- Where the candidate uses a valid method which is not covered by the mark scheme, award equivalent marks for reaching equivalent stages.
- Where an answer makes use of a candidate's own incorrect figure from previous working, the 'own figure rule' applies: full marks will be given if a correct and complete method is used. Further guidance will be included in the mark scheme where necessary and any exceptions to this general principle will be noted.

4 Annotation:

- For point marking, ticks can be used to indicate correct answers and crosses can be used to indicate wrong answers. There is no direct relationship between ticks and marks. Ticks have no defined meaning for levels of response marking.
- For levels of response marking, the level awarded should be annotated on the script.
- Other annotations will be used by examiners as agreed during standardisation, and the meaning will be understood by all examiners who marked that paper.

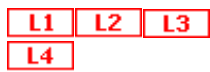
Annotations guidance for centres

Examiners use a system of annotations as a shorthand for communicating their marking decisions to one another. Examiners are trained during the standardisation process on how and when to use annotations. The purpose of annotations is to inform the standardisation and monitoring processes and guide the supervising examiners when they are checking the work of examiners within their team. The meaning of annotations and how they are used is specific to each component and is understood by all examiners who mark the component.

We publish annotations in our mark schemes to help centres understand the annotations they may see on copies of scripts. Note that there may not be a direct correlation between the number of annotations on a script and the mark awarded. Similarly, the use of an annotation may not be an indication of the quality of the response.

The annotations listed below were available to examiners marking this component in this series.

Annotations

Annotation	Meaning
	Correct point
	Development of point
	Incorrect point
	Level one/Level two/Level three/Level four
	Benefit of doubt
	Own figure rule
	Not answered question
	Repeat
	Indicates that the point has been noted, but no credit has been given
	Too vague

Question	Answer	Marks	Guidance
1(a)	State <u>two</u> marketing communications, other than leaflets. Each marketing communication [1] Answers may include: • television/radio/cinema • newspapers/magazines • posters/billboards • social media/online communication • word of mouth/announcements • sponsorship Accept business cards if seen	2	AO1 – 2
1(b)	State <u>two</u> factors an enterprise would consider before choosing marketing communications. Each correct factor [1] Answers may include: • cost/finance available/budget/affordability • time • availability/or a practical example • suitability/type of product/or a practical example • (potential to reach) target audience/market other potentially relevant factors	2	AO1 – 2

Question	Answer	Marks	Guidance
1(c)	Explain <u>one</u> advantage of using leaflets to attract customers. Identification of advantage [1] Explanation showing understanding [+1] Answers may include: Advantages: • fairly cheap to produce • easy to produce • can be delivered to target audience • contain a lot of information • can be kept for further reference • tailored to the needs of the enterprise/appeal to market • may include coupons to collect market information. Example: Cheap to produce [1] can be printed from a home computer/printer [+1]	2	AO1 – 2

PUBLISHED

Question	Answer	Marks	Guidance
1(d)	Explain <u>two</u> ways laws and regulations could affect the marketing of an enterprise. Each point should be marked as follows: Identification of a way [1] Explanation showing understanding of effect or example [+1] Answers may include: • marketing materials must be truthful • cannot make untrue claims about other products/services • products must be fit for purpose • products must be safe • copyright/plagiarism • environmental legislation • bans on some products/images being advertised • limits on where advertising can take place. Example: Copyright [1] you cannot use other people's products or ideas in your marketing [+1]	4	AO1 – 4

Question	Answer	Marks	Guidance
2(a)	Define the term <i>stakeholder</i>. Precise definition [2] Partial definition showing some understanding [1] An individual, group, organisation with an interest in <i>the activities/operations/running</i> of a business. [2] An individual, group, or organisation affected directly or indirectly by <i>the activities/operations/running</i> of a business. [2] An individual, group, or organisation with an interest in the business. [1] Someone interested in the business [1] Person <i>directly or indirectly</i> involved in a business [1]	2	AO1 – 2
2(b)	<u>Explain how <i>one</i> stakeholder was involved in your enterprise project. Use an example to support your answer.</u> Identification of the stakeholder [1] Explanation showing applied understanding of involvement [+1] Example from own enterprise experience [1] Answers may include: • competitors • customers/students • parents/family • suppliers • shareholders • teachers/principal/school Example: The principal [1] was interested in our smoothies [1] because we were selling in school [+1]	3	AO1 – 1 AO2 – 1 AO3 – 1

PUBLISHED

Question	Answer	Marks	Guidance
2(c)	State <u>two</u> disadvantages of secondary research. Each correct disadvantage [1] Answers may include: • may be outdated • completed for a different purpose/irrelevant/not your (specific) market • may be unreliable/do not know how the information was collected/sample used • available to competitors/everyone.	2	AO1 – 2
2(d)	Explain how <u>one</u> method of market research helped you to make a decision in <u>your enterprise project</u>. Use an example to support your answer. Identification of method /knowledge gained from market research [1] Explanation showing how it assists decision making [+1] Application to own enterprise project. [1] Example: Using online research to find competitors [1] helped us choose a competitive price [+1] for our t-shirts. [1]	3	AO1 – 1 AO2 – 1 AO3 – 1

Question	Answer	Marks	Guidance
3(a)	Using Table 1, calculate the total amount a customer would pay for the printing and delivery of <u>2000</u> leaflets. Show your working. 399.80 / 399.8 [4] cost of 100 leaflets = $14.99 + (0.05 \times 100) = 19.99 \times 20 = 399.80$ [4] If answer is incorrect marks can be awarded for: - Cost of 100 leaflets = $14.99 + (0.05 \times 100) = 19.99$ [3] Or $14.99 \times 20 = 299.80$ [2] 5 cents $\times$ 2000 = \$100 [1]	4	AO1 – 2 AO2 – 2
3(b)	Using Table 2, calculate, the number of leaflets Zac would need to print to break even if he charged <u>\$14.50</u> for every <u>100</u> leaflets. Show your working. 20 000 [4] 200 units of 100 leaflets [4] \$20 000 [3] If answer is incorrect up to 3 marks can be awarded for: $200 / (0.145 - 0.135)$ OR $200 / ([14.50 / 100] - [13.50 / 100])$ [3] Contribution = \$0.01 [2] Price per leaflet = 0.145 [1] Cost per leaflet = 0.135 [1] Breakeven = Fixed cost/contribution (price minus variable cost) [1] As the question does not specify printing is included accept: 3082 [4] $200 / (0.199 - 0.135) = [3]$ or $200 / 0.0649 = [3]$ Contribution = 0.064 [2] Delivery charge per 100 leaflets = \$5 [1]	4	AO1 – 1 AO2 – 2 AO3 – 1

Question	Answer	Marks	Guidance
3(c)	Explain <u>one</u> cost that Zac had forgotten to include in his research for his proposed enterprise. Identification of a cost not included in table 2 [1] Explanation/application to case study [+1] Answers may include: • His time/fuel/vehicle costs [1] for delivery/printing [+1] • Electricity/power [1] for the printer [+1] • Marketing/advertising for his enterprise [1] • Insurance/maintenance [1] in case the printer breaks [+1] • Rent/place [1] to his parents for the space needed for the printing stock/enterprise [+1] • Depreciation [1] for a new printer [+1] • Computer[1] to use when designing the leaflets [+1]	2	AO1 – 1 AO2 – 1

Question	Answer	Marks	Guidance
4(a)(i)	State the type of business organisation Zac’s leaflet enterprise will be. Sole trader [1]	1	AO1 – 2
4(a)(ii)	Explain <u>one</u> disadvantage to Zac of operating as this type of business organisation. Use an example from the case study to support your answer. Identification of a disadvantage [1] Explanation showing understanding [+1] Application to case study [1] Answers may include: • Unlimited liability/personally liable for all debts • Unincorporated/business and owner are the same thing • Lack of/difficult to raise finance • Lack of skills/knowledge of all areas of enterprise. Example: Lack of finance [1] as the main source of finance is the owner’s savings [+1] and Zac does not have enough to pay \$200 for a printer.[1] Difficult to raise finance [1] as a major source of finance is a bank loan [+1] and Zac is too young to qualify [1].	3	AO1 – 1 AO2 – 1 AO3 – 1

Question	Answer	Marks	Guidance
4(b)(i)	Explain how Zac's enterprise could be affected by: (i) advances in technology (ii) changes in taste Each point should be marked as follows: Identification of an effect [1] Explanation showing the effect on case study enterprise. [+1] advances in technology Answers may include: • easier for firms to produce their own documents • machinery becomes cheaper • machines become more productive/greater output • need to buy new equipment/services Example: Improvements in computer technology may make it easier for firms to produce their own documents [1] reducing the need for Zac's service [+1] Zac/he can produce leaflets online/using a computer [1] improving his productivity [+1]	4	AO2 – 2 AO3 – 2
4(b)(ii)	changes in taste Answers may include: • enterprises may need to update their marketing more frequently • new designs may be required • leaflets may become outdated. Example: Enterprises may need to update their marketing to show new products [1] increasing the demand for Zac's service [+1] People use social media to advertise [1] therefore Zac's leaflets are not required/demanded [+1]		

Question	Answer	Marks	Guidance
4(c)	Explain how you used <u>one</u> financial document in <u>your enterprise project</u>. Identification of financial document [1] Explanation showing how it was used [+1] Answers may include: • cashflow (forecast/statement) • income statement • budgets • receipts Example: Cashflow forecast [1] could show that there will be enough revenue to cover the costs of our cakes [+1] We used a budget [1] when negotiating for a loan with our parents [1]	2	AO1 – 1 AO2 – 1

Question	Answer	Marks	Guidance
5(a)	State <u>two</u> sources of finance, other than loans Each correct source [1] Answers may include: • community funds • crowdfunding • grants • leasing/hire purchase • overdraft • retained profit • share capital • venture capital • personal savings/owners capital	2	AO1 – 2
5(b)	Describe <u>one</u> way a bank can support enterprise, other than providing finance. Identification of a way [1] Explanation showing understanding [+1] Answers may include: • advice on completing forms for tax • help with business plans • overdraft facilities • store the enterprise money safely/open savings accounts • make payments for the enterprise Example: Banks offer advice [1] which will help the entrepreneur decide if the enterprise is worthwhile [+1]	2	AO1 – 2

Question	Answer	Marks	Guidance
5(c)	Justify why Zac should <u>not</u> buy the used printer. Identification of a disadvantage [1] Explanation showing understanding [+1] Application to case study [1] Answers may include: • more likely to break down/have limited life span • unknown quality • no guarantee/warranty if it breaks Example: More likely to break down [1] the \$200[1] would be wasted as he would need to buy another machine. [+1]	3	AO1 – 1 AO2 – 1 AO3 – 1
5(d)	Explain <u>one</u> action Zac can take to ensure that the negotiation with his parents is successful. Use an example from the case study to support your answer. Identification of an action [1] Explanation showing understanding [+1] Application to case study [1] Answers may include: • complete research/provide evidence of costs or demand • plan the negotiation/his arguments • present financial documents/business plan • setting the (correct) tone/or a practical example. Example: Complete research [1] to prove the number of customers willing to pay [+1] for his printing services. [1] Produce a business plan [1] as evidence that his printing enterprise [1] will be possible and a success. [+1]	3	AO1 – 1 AO2 – 1 AO3 – 1

Question	Answer	Marks	Guidance															
6(a)	Zac completed some research but did not complete a business plan. Analyse the benefits to Zac’s enterprise of producing a business plan. Use examples from the case study to support your answer. [10] <table><tr><th>Level</th><th>Description</th><th>Mark</th></tr><tr><td>3</td><td>Good analysis consistently applied to the case study Demonstrates good knowledge of concepts</td><td>8–10</td></tr><tr><td>2</td><td>Some analysis supported by good application to the case study Demonstrates knowledge of concepts</td><td>4–7</td></tr><tr><td>1</td><td>Limited application to the case study Demonstrates knowledge of concepts</td><td>1–3</td></tr><tr><td>0</td><td>No creditable response</td><td>0</td></tr></table> Knowledge may include: General content, benefits and purpose of a business plan e.g. • Provides essential information about the market • Identifies costs so can arrange finance in advance • Persuades financiers to invest • Produces targets so know if you have achieved them • helps with organisation so nothing is forgotten • helps to make business choices. Phrases which demonstrate some analysis may include: Helps him persuade his parents to lend him the money because he has produced financial records.	Level	Description	Mark	3	Good analysis consistently applied to the case study Demonstrates good knowledge of concepts	8–10	2	Some analysis supported by good application to the case study Demonstrates knowledge of concepts	4–7	1	Limited application to the case study Demonstrates knowledge of concepts	1–3	0	No creditable response	0	10	The grade descriptions describe performance at the top of the band.
Level	Description	Mark																
3	Good analysis consistently applied to the case study Demonstrates good knowledge of concepts	8–10																
2	Some analysis supported by good application to the case study Demonstrates knowledge of concepts	4–7																
1	Limited application to the case study Demonstrates knowledge of concepts	1–3																
0	No creditable response	0																

Question	Answer	Marks	Guidance																		
6(a)	Phrases which demonstrate good analysis will include the impact of this document on the enterprise. These may include: Helps him persuade his parents to lend him the money because he has produced financial records. His parents are willing to give the loan because he can prove that the printing enterprise can earn enough to repay the loan.																				
6(b)	Zac is not sure whether he should start the new leaflet enterprise. Evaluate whether the leaflet enterprise is likely to be a profitable enterprise for Zac. You should consider financial calculations in your answer. [15] <table><tr><th>Level</th><th>Description</th><th>Mark</th></tr><tr><td>4</td><td>Clear reasoned evaluation is present Good analysis applied consistently to the case study Demonstrates good knowledge of relevant concepts</td><td>12–15</td></tr><tr><td>3</td><td>Good analysis applied consistently to the case study is leading to evaluation Demonstrates knowledge of relevant concepts</td><td>8–11</td></tr><tr><td>2</td><td>Some application to the case study supported by some analysis Demonstrates knowledge of relevant concepts.</td><td>4–7</td></tr><tr><td>1</td><td>Limited application to the case study Demonstrates some knowledge of relevant concepts.</td><td>1–3</td></tr><tr><td>0</td><td>No creditable response</td><td>0</td></tr></table>	Level	Description	Mark	4	Clear reasoned evaluation is present Good analysis applied consistently to the case study Demonstrates good knowledge of relevant concepts	12–15	3	Good analysis applied consistently to the case study is leading to evaluation Demonstrates knowledge of relevant concepts	8–11	2	Some application to the case study supported by some analysis Demonstrates knowledge of relevant concepts.	4–7	1	Limited application to the case study Demonstrates some knowledge of relevant concepts.	1–3	0	No creditable response	0	15	The grade descriptions describe performance at the top of the band.
Level	Description	Mark																			
4	Clear reasoned evaluation is present Good analysis applied consistently to the case study Demonstrates good knowledge of relevant concepts	12–15																			
3	Good analysis applied consistently to the case study is leading to evaluation Demonstrates knowledge of relevant concepts	8–11																			
2	Some application to the case study supported by some analysis Demonstrates knowledge of relevant concepts.	4–7																			
1	Limited application to the case study Demonstrates some knowledge of relevant concepts.	1–3																			
0	No creditable response	0																			

Question	Answer	Marks	Guidance
6(b)	Knowledge may include: • what is profit • risks or returns from starting an enterprise • niche market. Phrases which demonstrate some analysis may include: Zac lacked some enterprise skills that he would need to be profitable such as time management. Unlikely to sell more than 20 000 /200 leaflets to start making profit. Phrases which demonstrate good analysis will the likely impact of the choice on the enterprise. These may include: Zac lacked some enterprise skills that he would need to be profitable such as time management. This may mean he could not make enough leaflets to go beyond breakeven point. Evaluation may be shown by a two-sided approach considering the positive and negative aspects of the decision.		

PUBLISHED

Question	Answer	Marks	Guidance															
7(a)	Enterprises compete in different ways, including: [10] • effective customer service • marketing communications • pricing of goods and services • unique goods or services. Analyse the effectiveness of <u>two</u> of these ways in helping to gain customers in <u>your enterprise project</u>. Use examples to support your answer. <table><tr><th>Level</th><th>Description</th><th>Mark</th></tr><tr><td>3</td><td>Good analysis consistently applied to their own enterprise experience. Demonstrates good knowledge of concepts</td><td>8–10</td></tr><tr><td>2</td><td>Some analysis supported by good application to their own enterprise experience. Demonstrates knowledge of concepts</td><td>4–7</td></tr><tr><td>1</td><td>Limited application to their own enterprise experience. Demonstrates knowledge of concepts</td><td>1–3</td></tr><tr><td>0</td><td>No creditable response</td><td>0</td></tr></table> Knowledge may include: • description of methods of pricing/ marketing communications/customer service • general advantages and disadvantages of the methods.	Level	Description	Mark	3	Good analysis consistently applied to their own enterprise experience. Demonstrates good knowledge of concepts	8–10	2	Some analysis supported by good application to their own enterprise experience. Demonstrates knowledge of concepts	4–7	1	Limited application to their own enterprise experience. Demonstrates knowledge of concepts	1–3	0	No creditable response	0	10	The grade descriptions describe performance at the top of the band.
Level	Description	Mark																
3	Good analysis consistently applied to their own enterprise experience. Demonstrates good knowledge of concepts	8–10																
2	Some analysis supported by good application to their own enterprise experience. Demonstrates knowledge of concepts	4–7																
1	Limited application to their own enterprise experience. Demonstrates knowledge of concepts	1–3																
0	No creditable response	0																

PUBLISHED

Question	Answer	Marks	Guidance
7(a)	Phrases which demonstrate some analysis may include: My marketing communications (posters) included a competition, a raffle which attracted attention. Unique product-we chose original designs for the clothes. Phrases which demonstrate good analysis will the impact of the document on the operation/success of the enterprise. These may include: My marketing communications (posters) included a competition which attracted attention and encouraged people to buy more to be entered. Unique product – we chose original designs for the clothes; we had no competition and therefore attracted lots of customers and revenue.		

Question	Answer	Marks	Guidance																		
7(b)	An entrepreneur will use many skills in the planning and operation of their enterprise. These include: • creativity • delegation • practical skills • time management. Evaluate which of these enterprise skills was the most important to the success of <u>your enterprise project</u>. Justify your choice, <table><tr><th>Level</th><th>Description</th><th>Mark</th></tr><tr><td>4</td><td>Clear reasoned evaluation is present Good analysis applied consistently to their enterprise Demonstrates good knowledge of relevant concepts</td><td>12–15</td></tr><tr><td>3</td><td>Good analysis applied consistently to their enterprise is leading to evaluation Demonstrates knowledge of relevant concepts</td><td>8–11</td></tr><tr><td>2</td><td>Some application to their enterprise supported by some analysis Demonstrates knowledge of relevant concepts</td><td>4–7</td></tr><tr><td>1</td><td>Limited application to their enterprise Demonstrates some knowledge of relevant concepts</td><td>1–3</td></tr><tr><td>0</td><td>No creditable response</td><td>0</td></tr></table> including why you rejected <u>two</u> of the other skills. [15] Knowledge may include: • Definition/explanation of any skill • Measures of success used in enterprise.	Level	Description	Mark	4	Clear reasoned evaluation is present Good analysis applied consistently to their enterprise Demonstrates good knowledge of relevant concepts	12–15	3	Good analysis applied consistently to their enterprise is leading to evaluation Demonstrates knowledge of relevant concepts	8–11	2	Some application to their enterprise supported by some analysis Demonstrates knowledge of relevant concepts	4–7	1	Limited application to their enterprise Demonstrates some knowledge of relevant concepts	1–3	0	No creditable response	0	15	The grade descriptions describe performance at the top of the band.
Level	Description	Mark																			
4	Clear reasoned evaluation is present Good analysis applied consistently to their enterprise Demonstrates good knowledge of relevant concepts	12–15																			
3	Good analysis applied consistently to their enterprise is leading to evaluation Demonstrates knowledge of relevant concepts	8–11																			
2	Some application to their enterprise supported by some analysis Demonstrates knowledge of relevant concepts	4–7																			
1	Limited application to their enterprise Demonstrates some knowledge of relevant concepts	1–3																			
0	No creditable response	0																			

Question	Answer	Marks	Guidance
7(b)	Phrases which demonstrate some analysis may include: Time management was important as our baked goods could only be produced the day before the bake sale. Phrases which demonstrate good analysis will the impact of the skill on the enterprise. These may include: Time management was important as our baked goods could only be produced the day before the bake sale. By managing our time we were able to bake enough fresh cakes and have time for schoolwork. Evaluation may be shown by a two-sided approach considering the negative aspects of skills.		