Constructing and Implementing a Cross-Cultural Adaptation Teaching System for Higher Vocational Students Studying in Hungary: The Case of a Sino-Hungarian Joint Programme Class

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Abstract: Chinese higher vocational education has steadily expanded its Sino-foreign cooperative programmes with Central and Eastern European countries, driven by the Belt and Road Initiative and by deepening educational cooperation between China and the region. This paper reports a case study of the Sino-Hungarian joint programme, jointly established by Shandong Vocational College of Information Technology and the University of Miskolc in Hungary. Drawing on theories of intercultural adaptation, it examines the difficulties that engineering students encounter when they move from a three-year vocational diploma into bachelor-level study in Hungary, and describes a five-component instructional system — objectives, content, faculty, pedagogy, and assessment with quality assurance — built to address them. Implementation results are reported, and the model is offered as a practical reference for intercultural education in comparable vocational cooperative programmes aimed at Central and Eastern Europe.

***Keywords*:** higher vocational education; Chinese-foreign cooperative education; cross-cultural adaptation; University of Miskolc; Sino-Hungarian joint programme

1. Introduction

Vocational education in China has entered a phase in which internationalisation is judged by quality rather than by the number of agreements signed. Cooperation with Central and Eastern European (CEE) countries has given higher vocational colleges a new opening. National policy has repeatedly encouraged vocational colleges to run joint technical and skilled training with CEE institutions [1]. Most such programmes, however, put their effort into aligning specialized courses and revising the talent cultivation plan. What happens to students once they go abroad attracts much less attention, and cross-cultural preparation is treated as a supplement rather than as part of the curriculum [2-4].

Research on the cross-cultural adaptation of Chinese students abroad has concentrated on undergraduates in the United Kingdom, the United States and other English-speaking destinations [5,6]. The group considered here is different. These students enter a vocational college at sub-degree level, spend two or three years studying in China, and then transfer to a Central European university to finish a bachelor's degree. They tend to be competent with equipment and hands-on tasks, but they have had little exposure to international cultural environments. Placed in an unfamiliar Central European setting, they run into communication barriers, psychological disorientation and difficulty adjusting to workplace expectations — and all three bear on how they perform in the degree stage.

This paper reports what one programme did about it. The case is the Sino-Hungarian class at the Miskolc Institute, established jointly by Shandong Vocational College of Information Technology and the University of Miskolc. We set out to establish where these students actually struggle, to design a teaching system that responds to those struggles within the resources a college already has, and to test whether the system made a measurable difference in its first cohort. The contribution is practical rather than theoretical: a documented model that comparable colleges can adapt.

2. Theoretical foundations

Cross-cultural adaptation refers here to the process through which a person comes to function effectively in an unfamiliar cultural environment, including its communicative, academic and occupational demands [7]. Three bodies of work shaped the design.

2.1 Oberg's four stages of culture shock

Oberg [8] described adjustment to an unfamiliar culture as a sequence of four stages: honeymoon, crisis, readjustment and adjustment. Students who arrive in Hungary to begin a degree usually pass through a brief honeymoon, when novelty outweighs inconvenience. The crisis stage follows, and there language barriers, unfamiliar customs and academic pressure

combine into anxiety and a sense of failure, the cluster Oberg labelled culture shock. Readjustment comes slowly, and only through deliberate effort.

For teaching purposes the model works less as a description than as a warning about timing. Preparation cannot be a single lecture before departure. It has to start while students are still in China, before the crisis has a chance to take hold, and it has to continue after they arrive.

2.2 Systems theory of instruction

Systems theory treats instruction as an organised whole whose elements depend on one another; the intended outcome appears only when they work together. A stand-alone course on Hungarian society and culture cannot deliver cross-cultural adaptation. Objectives, content, teachers, learning activities and assessment have to be aligned, and the sequence has to close, from the domestic phase through the stay abroad and beyond. That reasoning is what produced a five-component framework rather than a list of separate activities.

2.3 Berry's acculturation strategies

Berry [9] sorted adaptation strategies along two questions: does the person maintain their heritage identity, and do they take part in the host culture? The four resulting positions are integration, assimilation, separation and marginalisation. The system described here is oriented towards integration by design. Students are expected to keep a firm Chinese cultural identity and, at the same time, to understand Hungarian society, its teaching conventions and its workplace culture. Framed that way, the aim is to keep students clear of two extremes: cultural isolation on one side, uncritical assimilation on the other.

3. Where the students struggle

The Miskolc Institute runs engineering programmes only, and its students are being trained as technicians and engineers for information technology and smart manufacturing. We surveyed the Sino-Hungarian joint programme class: 32 questionnaires were issued and 30 valid responses returned, a valid response rate of 93.75%. Set beside the interview material, the responses fall into four clusters.

Language is where the difficulty starts. Every specialized course in the Hungarian phase is taught in English, and Hungarian is not a compulsory subject; students are expected to pick it up on their own, mostly through apps such as Duolingo. General English is uneven across the class. Reading a simple text is manageable for most, but listening and speaking are weak, and students freeze in seminar discussion and in exchanges with Hungarian lecturers or company engineers during practical training. Hungarian is in worse shape. Without a teacher, without situational practice and without anyone checking progress, many students download an app, use it for a few weeks and stop, ending up with a handful of set phrases. Shopping, seeing a doctor, taking the right tram: ordinary errands stay uncertain. Existing provision leans on general English and offers little training in the English that IT and electrical engineering undergraduates actually need.

The second difficulty concerns how students are expected to learn. Engineering degrees at the University of Miskolc are built around independent inquiry, group discussion and project work assessed on what a team produces. Domestic vocational teaching is still largely lecture-based, and a good number of students have spent two years in the role of passive recipient. They are not used to searching foreign-language literature on their own, or to carrying a group project through to a deadline. Once in Hungary the mismatch surfaces quickly. The talent cultivation plan has already been aligned course by course with the Hungarian side, but nothing in it prepares students for how a Hungarian classroom works: what counts as participation, how assignments are graded, what a project supervisor expects.

Life outside the classroom raises a third set of problems. Students can find material on Hungarian customs, social etiquette and workplace norms on Douyin or Xiaohongshu, but what they find is fragmentary and of uneven reliability. Hungary differs from China in social conventions, in attitudes to time, in residence and health insurance rules, in expectations of public order. Many students arrive with only a vague picture of Central European society, and loneliness, homesickness and reluctance to approach strangers follow. At the point this study began, our own provision for cultural orientation and psychological preparation was thin.

A fourth gap concerns professional culture. Students have opportunities to intern with Hungarian IT and manufacturing firms while studying, and some will later work for Chinese-invested companies in Hungary. Hungarian firms organise project work and communicate internally in ways that differ from Chinese practice. Most students concentrate on technical competence and give little thought to how a Hungarian team actually operates. Provision for cross-cultural professional competence among engineering students in vocational programmes needs strengthening.

4. The five-component teaching system

Drawing on these findings and on the three positions above, we built the system around five components: objectives, content, faculty, pedagogy, and assessment and support. They are meant to hold together as one framework.

4.1 Tiered objectives

Objectives are set in three tiers, ordered by what a student can realistically reach, and whenthey can achieve them. Settling in comes first. Students should be able to manage everyday situations in basic Hungarian, understand local social conventions and the rules on residence and personal safety, and handle minor cultural misunderstandings calmly rather than avoiding them. A stable daily life removes a large part of the psychological weight of studying abroad.

Academic integration comes second: adapting to English-medium, project-based undergraduate teaching at Miskolc, and steadily improving the ability to present technical work in English.

The third tier sits at the level of values. Following Berry's integration strategy [9], students should hold on to cultural confidence while building genuine two-way understanding, which opens the path to a master's degree and to employment with an international employer in Hungary. The outcome we are aiming at is a technician or engineer who can work between the two countries' industries.

4.2 Content

Three modules carry the content, each answering one of the problem clusters in Section 2.

4.2.1 Language

The language module has three strands. The first is everyday English for life in Hungary: airports, accommodation, banks, hospitals, supermarkets, public transport, police stations, appointments, complaints, emergency calls. The emphasis falls on listening and on answering under pressure, because that is where students fail. The second strand is English for specialized purposes, built around the software, big data, internet of things, networking and electrical automation programmes, and covering technical vocabulary, the reading of foreign documentation, project presentations and conversations with an engineer on site. The third strand is Hungarian itself. Here we can supply resources only — a pack of survival phrases for daily situations, and an online check-in group to keep people practising. Hungarian carries no credit requirement in this programme, and we cannot make it compulsory, so the realistic aim is enough language to get through a day.

4.2.2 Culture

The culture module covers Hungarian society and customs, differences between Chinese and Hungarian norms, residence and health insurance regulations, personal safety, and cross-border social etiquette. The module will be delivered through online micro-lessons, special lectures, documentary appreciation and other forms.

4.2.3 Professional culture

The professional module covers safety rules for internships in Hungarian firms, workplace communication, intellectual property requirements and, for the longer term, the working culture of Chinese-invested companies in Hungary. Engineers from those companies join online sessions, and the cases they bring are chosen to match the engineering degrees and internships our students actually enter.

4.3 Faculty

Teaching is delivered by a mixed team. The internal group comprises general English teachers, engineering teachers and programme administrators. From outside we bring in returning teachers who have trained or taught in Hungary, staff from study-abroad agencies, part-time lecturers from the University of Miskolc, and engineers from Chinese-invested firms in Hungary who teach online. Domestic teachers, Hungarian academics and industry practitioners each cover part of the programme. None of them could cover it alone.

4.4 Pedagogy

The delivery model combines pre-departure teaching, immersive simulation and online follow-up. Cross-cultural teaching is concentrated in the domestic phase. Teachers reconstruct Hungarian seminar discussion and internship communication as role-play, so that students meet something close to a real exchange before they leave. The project team also arranges regular online sessions between Chinese and Hungarian students, which do more for mutual understanding than any lecture on cultural difference. Once students are in Hungary, the Chinese programme tutor and the Hungarian counterpart stay in contact online and step in during the crisis stage, when emotional trouble is most likely. Whether pre-departure training turns into adaptation capacity abroad depends, in the end, on how consistently that follow-up is maintained. We return to this in Section 4.3.

4.5 Assessment and support

Cross-cultural training is embedded in the programme's supporting components and fixed in regulation, so that it does not depend on the enthusiasm of individual teachers. Psychological support runs in parallel: the college operates a counselling channel for students abroad and an emergency contact procedure. Marks alone cannot capture adaptation, and that is why the assessment was redesigned. Teachers use formative assessment, combining the quality of completed tasks, performance in simulation, traces of online self-study and reflective writing after the stay. Students assess themselves, domestic teachers assess them, and Hungarian teachers give a third judgement. The three are read together, and the record is kept so that adaptation can be tracked over time rather than summarised in a single grade. Whether these process data reflect real change still needs testing across further cohorts.

5. Implementation and outcomes

5.1 How the system was applied

The framework was applied to the 2023 cohort of the Sino-Hungarian joint programme class. The first group finished their domestic courses and left for Hungary in early 2026, and the arrangements for tracking them abroad were in place before they went. In the domestic phase the pre-departure content was delivered as planned: courses in everyday spoken English, sessions on English for specialized purposes, lectures on Hungarian society, simulated classroom communication, and a peer group for daily Hungarian practice. For the period abroad, the two institutions set up a joint online channel and an emotional support mechanism, and the team monitors coursework, daily life and internship progress.

To evaluate the result we surveyed the class again and obtained 30 valid responses. The instrument used a five-point Likert scale and covered five dimensions: language adaptation, adaptation to the learning mode, cultural and psychological adaptation, cross-cultural professional competence, and overall evaluation of the system. Table 1 gives the descriptive statistics.

Table 1. Descriptive statistics by dimension (n = 30)

Dimension	Items	Mean	SD
Language adaptation	3	3.81	0.74
Adaptation to the learning mode	3	3.72	0.78
Cultural and psychological adaptation	4	3.68	0.83
Cross-cultural professional competence	3	3.90	0.71
Overall evaluation of the system	3	3.77	0.75

Note: Five-point Likert scale, 1 = strongly disagree, 5 = strongly agree.

Every dimension scored above the theoretical midpoint of 3, which indicates that students felt the system had helped them. Cross-cultural professional competence scored highest (M = 3.90, SD = 0.71): students reported the clearest gains in what they had learned about studying and interning in Hungary. Cultural and psychological adaptation scored lowest (M = 3.68, SD = 0.83), and the wider spread matters here. Culture shock remains the hardest part of the transition for students who enter at sub-degree level. Language adaptation averaged 3.81. Professional English improved, but because Hungarian is studied independently, the distance between the strongest and weakest learners widened rather than closed.

Students were also asked to choose the single component that had helped them most. Table 2 reports the result.

Table 2. Teaching component rated most helpful (n = 30)

Component	Students	Share
Hungarian undergraduate teaching and internship norms	9	30.0%
Hungarian language and specialist English courses	8	26.7%
Hungarian society and cultural etiquette	7	23.3%
Online exchange with Hungarian students and cultural simulation	4	13.3%
Psychological counselling and one-to-one guidance	2	6.7%

Sessions on Hungarian undergraduate teaching and internship norms were chosen by 30.0% of respondents, ahead of language courses (26.7%) and Hungarian society and etiquette (23.3%). Students were more concerned about coping with the degree and the workplace than about language or cultural knowledge in themselves. The open-ended responses support

that reading. Online exchange sessions and role-play were singled out for praise. The criticisms were consistent: online Hungarian resources are too thin, support after arrival needs to be more sustained, and there is too little cultural training attached to specific professional situations. Those three points set the agenda for the next iteration.

5.2 Outcomes

Language use improved first. Students now handle residence paperwork, medical appointments and traveling in English without much difficulty, and their specialized English carries them through seminar discussion and internship communication better than it did a year earlier.

The psychological effect was less expected. Because students had already rehearsed what culture shock looks like, the abrupt loss of competence that usually marks the first months abroad was shorter and less severe, and they were less inclined to read it as personal failure. Something similar happened with the rules of study: students now read Hungarian project-based teaching and internship conventions more accurately, which shows in how they approach an assignment and how they interpret a supervisor's expectations.

The fourth change is slower and harder to measure. Cross-cultural professional competence has begun to take shape, and it matters both to those who go on to a master's degree and to those who will work for a Chinese-invested firm in Hungary, where standing depends on being able to move between two sets of workplace expectations.

5.3 What remains unresolved

Three weaknesses remain. Hungarian still depends on self-study through an app, with no systematic materials behind it, so progress varies widely from student to student. Simulated settings in China are not the same as a Hungarian seminar room or a plant floor, and the number of genuinely immersive situations we can create is limited. And the dynamic tracking of students abroad needs to be specified more precisely; at present we record more than we can interpret.

6. Conclusion

This paper followed the Sino-Hungarian joint programme class at the Miskolc Institute. Combining Oberg's account of culture shock, systems theory of instruction and Berry's adaptation strategies [8,9], we identified four kinds of difficulty that sub-degree entrants face when they move to Hungary to complete a degree: language, learning mode, cultural and psychological life, and professional culture. The five-component system that followed — objectives, content, faculty, pedagogy, and assessment and support — was built to fit the actual conditions of the programme: English-medium instruction abroad, Hungarian learned independently at home, and destinations that include further study and employment with Chinese-invested firms as well as the degree itself. It also keeps the practice-heavy character of engineering study in vocational colleges in view.

The first cohort's results suggest that the system works and can be delivered with the resources a college already has. They do not yet show that it works for every student, or that the effect holds. We are collecting data from subsequent cohorts, and the three weaknesses noted in Section 5.3 are where the next revision will start. For vocational colleges elsewhere in China building programmes with Central and Eastern European partners, the framework offers a structure to adapt rather than a model to copy, and one that may prove useful as vocational education internationalisation shifts from expansion to quality.

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